JAN 25 1941

THE BUILDER

a Journal for the ARCHITECT & CONSTRUCTOR

Vol. CLIX. No. 5108. Ninety-Eighth Year.

FRIDAY, DECEMBER 27, 1940

REGISTERED AT THE GENERAL POST OFFICE AS A NEWSPAPER

PRICE NINEPENCE.

WALLBOARD SERVICE

MANY TYPES AND SIZES READY FOR IMMEDIATE DESPATCH

PHONE HOP 3511

Walter S. Fry LTD.

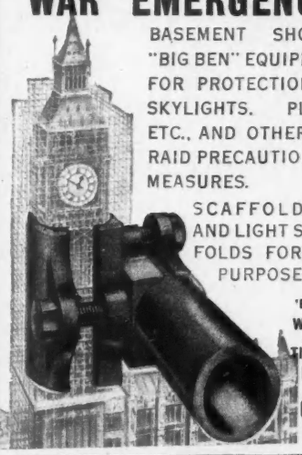
106-114 BORO HIGH STREET S.E.1

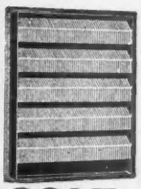
WAR EMERGENCY.

BASEMENT SHORES. "BIG BEN" EQUIPMENT FOR PROTECTION OF SKYLIGHTS. PLANT. ETC., AND OTHER AIR RAID PRECAUTIONARY MEASURES.

SCAFFOLDING AND LIGHT SCAFFOLDS FOR ALL PURPOSES.

'Phone: Walton-on-Thames 614 and 615





Problem of BLACKOUT VENTILATION solved!

Types for every purpose. Approved by Government Authorities and eminent scientists. Write for brochure.

COLT BLACKOUT VENTILATOR

Colt Ventilation Ltd., 112, Bush House, Strand, W.C.2.

The BOSTWICK GATE and SHUTTER CO. LTD

A.R.P. DOORS & SHUTTERS GENERAL METALWORK

HYTHE ROAD, WILLESDEN, LONDON, N.W.10

ESCALATORS & LIFTS

J. & E. HALL Ltd.

ENGINEERS

DARTFORD, KENT, ENGLAND

Incorporating the business of MEDWAY'S SAFETY LIFT CO., LTD.

The STEEL SCAFFOLDING CO. LTD.

"BIG BEN TOWERS,"

23 OATLANDS DRIVE, WEYBRIDGE, SURREY

TARMACADAM EVERYWHERE!

GENERAL TARPAVIORS LTD

HOPE HOUSE, GREAT PETER ST S.W.1

and at LIVERPOOL & BIRMINGHAM

DESIGNS COVERBOND FABRIC

TWISTEX REINFORCEMENT LTD. ALMA STREET SMETHWICK STAFFS.

STEELWORK BY SHARMAN

Also Manufacturers of STEEL GAS AND SPLINTER PROOF DOORS

SWAN WORKS, HANWORTH, MIDDX.

Phones: Feltham 3007, Molesey 1789.

LONDON OFFICE: 10 Nicholson St. MANCHESTER OFFICE 42 CHARLES ST

A. & P. STEVENS LTD. LIFTS

PROVANSIDE WORKS GLASGOW

Rolling Shutters, Lifts

IRON DOORS, STAIRS, GATES.

DENNISON, KETT & CO., LTD. Tel.: Reliance 1664

Kenoval House, 226-230, FARMERS RD., LONDON, S.E.5.

LIFTS PORN & DUNWOODY LTD

UNION WORKS,

BEAR GDNS., LONDON, S.E.1, WAT. 7107 (3 lines)

MARBOLITH

DERMAS IMPREGNATED FLOORING

OVERCOMES SHORTAGE OF TIMBER SUPPLIES

Particulars and Samples from

THE MARBOLITH FLOORING CO. LTD.

29 ALBERT EMBANKMENT, LONDON, S.E.11

RELIANCE 2062-3

PERMANITE ASPHALTE

LIFTS by MORRIS of LOUGHBOROUGH and 39 Victoria Street London S.W.1

POSITIVE WATERPROOFING AND DENSIFICATION OF CONCRETE AND ALL CEMENT WORK

TRICOSAL

A. A. BYRD & CO. LTD., 11, QUEEN VICTORIA STREET, LONDON, E.C.4. PHONE: CITY 3068

EVANS LIFTS LTD

ABBEY LANE, LEICESTER.

London Office: 66 VICTORIA STREET, S.W.1.

ALDOUS—CAMPBELL LIFTS

TEL.: HOP 2727 (2 lines). LONDON, S.E.1

THE SEYSSEL & METALLIC LAVA ASPHALTE CO.

MR. G. F. GLENN. Proprietors.

MOORGATE STATION CHAMBERS, E.C.2.

Telephone: METropolitan 0262.

RAGUSA ASPHALTE

NOTE TEMPORARY ADDRESS 18 GRANGE ROAD, SUTTON

TELEPHONE:—VIGILANT 6207-8-9

PROTECTION

— but not against

Damp

There is one enemy whose insidious attacks must be fought all the time—DAMP. Costly repair bills can only be avoided by ensuring that damp does not penetrate the outer walls. Protection can be guaranteed by treating the walls with

No 2 METALLIC LIQUID

Brushed on the surface of exterior walls it destroys capillary attraction and sets up an invisible yet impenetrable barrier against rain. There is no disfiguring of the building with glossy or oily stains, nor does any discoloration occur. Buildings which have been damp for years can successfully be made as dry as a bone. There is no need to wait for wet walls to dry out. No. 2 Metallic Liquid can be applied **DURING THE WINTER MONTHS.**

SOLD UNDER GUARANTEE

The cost is low, **6/- to 8/-** per gallon according to quantity. For over 20 years specified extensively by the War Office, Air Ministry and Municipal Authorities, and leading Architects and Surveyors.

Write for Booklet B, giving full particulars.

GEORGE LILLINGTON

AND CO. LTD.

WATERPROOFING SPECIALISTS

30 DENMAN STREET, LONDON BRIDGE, S.E.1

★ **EMERGENCY TELEPHONE: EWELL 1851**

Scottish Office: 78 St. Vincent Street, Glasgow, C.2

The quickest way to remove paint

and the cheapest is with *(Ref. 31)*

QUICKSTRYP

the ideal *one-application* stripper for old, hard, thick, weathered paint. Will not dry up and remains wet and working for 24 hours.

or with *(Ref. 32)*

QUICKER-STRYP

which is NON-INFLAMMABLE and ideal for removing varnish, enamel polish, high temperature stoved enamel and thin coats of paint in *one application.*

Approved by The Ministry of Aircraft Production.

For removing Varnished and Waxed Wallpapers, use *(Ref. 37)*

QUICKSTRYP No. 2 WALLPAPER STRIPPER

Soaks right through to plaster, however many papers. Saves time and money.

All Quickstryp Products are guaranteed free from Acid or Alkali and harmless to eyes, skin and clothing.

A postcard will bring full information.

QUICKSTRYP CHEMICAL CO., LTD.

20-22, WILTON STREET, BRADFORD.

AVELING DUMPER

SPEEDS UP BUILDING SITE EXCAVATION

In addition to surface work the "Aveling" Dumper on this job was utilised to shift material excavated for the underground vaults. From twenty feet down the Dumper carried its full load up a ramp of 1 in 5. Cramped space prohibited the use of a lorry and, besides, the Dumper was much quicker.

Full particulars of the "Aveling" Dumper sent on request.

AVELING-BARFORD·LTD

GRANTHAM · ENGLAND.

THE BUILDER

INCORPORATING

"ARCHITECTURE" AND "THE BRITISH ARCHITECT"

VOL. CLIX DECEMBER 27 1940 No. 5108

IMPROVISATION

IF everything we needed were to hand, it would be possible to sit down and devise the ideal scheme of air-raid shelter for the whole community. Different places would need different treatment, but beyond that there would be no obstacle to the provision of complete protection for the civil population against air attack. We should make "bomb-proof" the universal standard; and we should no doubt in effect build our towns afresh deep underground, and complete with all the amenities, other than daylight, which we enjoy in peace time.

Unfortunately we are not in that position. We are short of money, short of materials, and, above all, short of time. Probably if we had acted early enough to make these elaborate preparations, we should not now have had the money to wage war at all, and our elaborate catacombs would then have become no more than interesting relics.

The fact remains, however, that we have not yet done all that can be done to protect the population against the larger risks of air warfare. Much has been done, and done with great commonsense and forethought, but there is still much more to do, and it is good to know that efforts are being maintained to carry on with this urgent public service.

It is right that the first attention should be paid to the needs of the larger towns and cities, where the population is most densely congregated and the risks of greater disaster more acute. But by the same measure, given the will to do the job, the problem is more easily surmounted in the cities than in the smaller towns and villages. Each of these is a problem in itself, and the things which will serve one of them well do not apply at all to another, whereas the cities lend themselves more readily to a standardised treatment, which can be rapidly put into effect by means of mass production.

The problem of the small town is often a perplexing one. For a small but distinct area, its core bears many of the features of city life, with its closely packed houses, its dense traffic, and its crowds of shoppers during the business hours of the day and week. Beyond that busy centre, the features of the town fine themselves out, and take on entirely fresh needs. There may be a few dense housing schemes, close enough to make a tempting target, and yet not close enough to afford mutual protection, one structure to another. Farther out there will be residential estates of varying density, but bearing no similarity either to the city or the housing estate.

The authority which is faced with the problem of "sheltering" such a mixed area as this is generally one less generously staffed than its city prototypes, and less able to deal with the needs of the case in an urgent and comprehensive way. Generally, when it comes to a distribution of materials for such services, the small towns stand far down on the list, and have to wait long for a still inadequate supply.

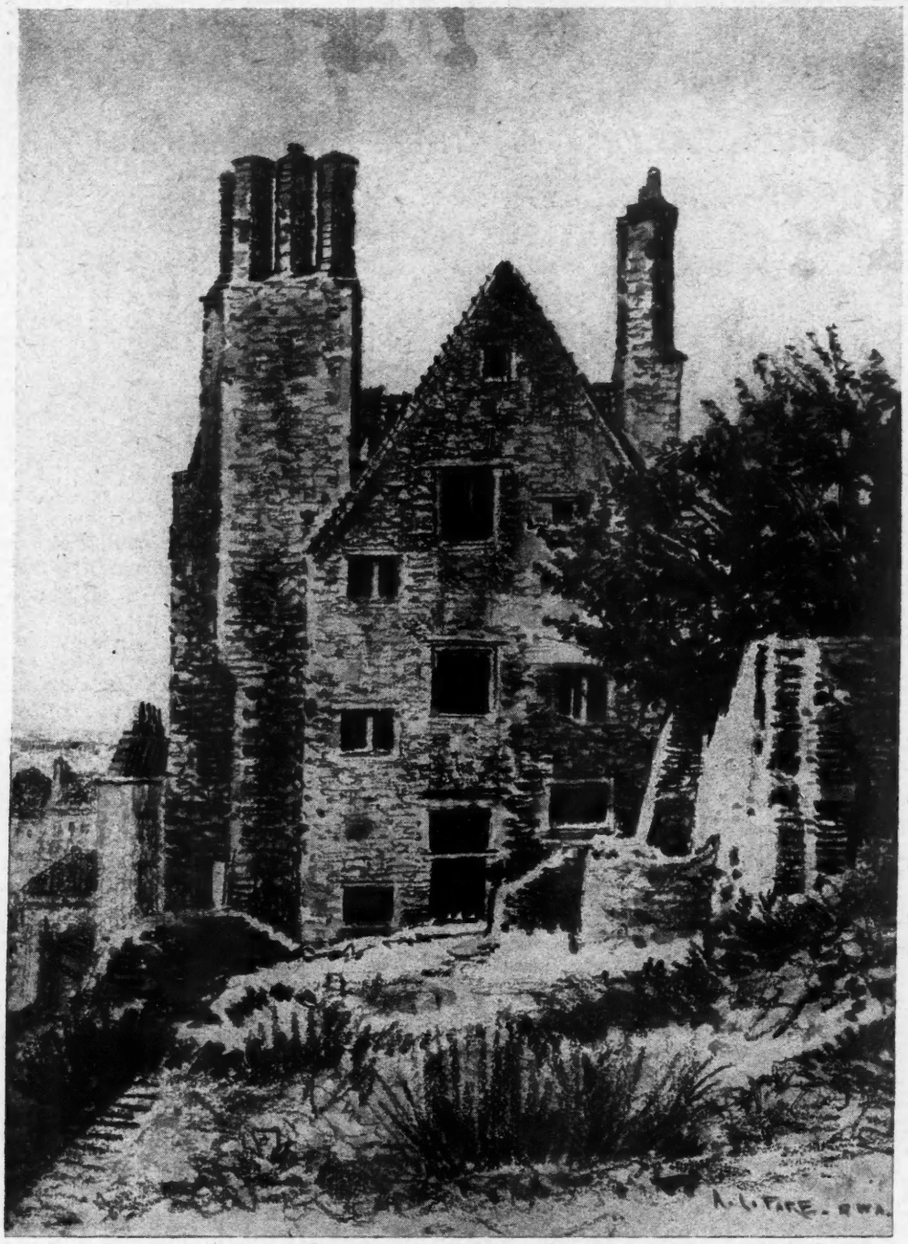
The only course which an authority can follow in such circumstances, if it is not content meekly to await its turn, is to improvise, and again improvise. The standard types of shelter, and the standard advice which are available to all, are of little avail if they remain only on paper. The conscientious authority must bestir itself in seeking every rough and ready means at its disposal to provide blast and splinter-proof shelter for as many of its inhabitants as possible. Particularly is this needful in the busy central streets of such towns, and already much has been done in the way of strengthening basements and maintaining access to them. But it does not seem that every possibility has been tried, nor that the possibility of bombing and machine-gun attack upon a shopping crowd has been fully visualised. The need for many convenient retreats at every stage of the streets cannot be too much emphasised. In particular, there seems to have been little use made of those many narrow and well-protected alleyways which so frequently occur between the properties of a country street. Many of them are already arched over and protected with two or three strong floors over. The others could be roofed over with the use of little material and in a very short time, and both types could be protected at the ends with blast walls, which would certainly obstruct the footways no more than do the road blocks which are a common feature of war-time England.

In other cases use might very well be made of vacant shop or house property, within which a relatively small degree of structural strengthening would produce capacious and most accessible shelters. Something of the spirit which inspired the authorities of Ramsgate to make full use of their ready-made tunnel system is needed throughout the country.

Unfortunately, improvisation is not the genius of the official mind. The official likes to deal with precise things and to make inelastic plans. He finds improvisation very difficult to enter upon the minutes, and so he is inclined to pass by many of the offerings of good fortune which less rigid minds would find.

We wonder how far these local authorities are making use of their local committees of architects, and whether they have found that particular type of quick-minded intelligence very suitable to apply to such opportunist activities.

We fear, however, that the public has for so long looked upon architects, and particularly upon country architects, as the servants of luxury and extravagance that there can be little hope of any change of heart in the near future.



AN OLD HOUSE TO BE DEMOLISHED, BRISTOL.

The Corporation of Bristol have cleared an area west of the Red Lodge, which was formerly a congested slum of courts and steep alleys. They have left a few Georgian houses which are in a fair state of repair, and intend later to use the rest of the site for improved dwellings. The old house depicted was let out as a crowded tenement to many families and will shortly be demolished. The drawing reproduced is by Mr. A. C. Fare, R.W.A.

NOTES AND NEWS

Planning the New Dublin.

DUBLIN is to take advantage of the war to implement the scheme of replanning prepared by its consultants. Proposals to change the whole plan of the city were contained in a report adopted by the General Purposes Committee of the Dublin Corporation. The report deals with such matters as the provision of new roads, streets and bridges, new public buildings, parks and playgrounds, and it recommends the adoption of certain principles in regional planning and zoning.

Among the recommendations made by the consultants are that the new cathedral should be built on the site bounded by Lower Ormond-quay, Lower Liffey-street, Capel-street, and Upper Abbey-street, instead of in Merrion-square; a new City Hall should be built near the present City Hall, flanking a widened Parliament-street; and that new Government departmental buildings should be contained in the rectangle bounded by St. Stephen's Green, North; Upper Merrion-street, Kildare-street, and Leinster-street—Clare-street.

Among other proposals are the erection of a new bridge, of an opening type, east of Butt Bridge; the rebuilding of the "metal" bridge; and the provision of two new parks and "neighbourhood centres." In a supplementary report, occasioned by war conditions, the consultants —Professor Patrick Abercrombie, Mr. Sydney A. Kelly and Mr. Manning Robertson—observe that the course of the present war had made it painfully clear that cities in future always would have to take into account risks arising from possible air attack. Planning so that the population would attain the maximum safety in war, combined with efficiency and comfort in peace-time, was essential.

M.P.s and Post-War Reconstruction.

THE non-party group of peers and M.P.s formed to promote the post-war national policy for the planning and reconstruction of town and country met on December 17, when Lord Balfour of Burleigh was elected Chairman of the group, with Mr. Henry Strauss as secretary. The group heard certain proposals from Professor Patrick Abercrombie, a member of the Royal Commission on the Geographical Distribution of the Industrial Population, and it was agreed that the group should seek an early opportunity of meeting Lord Reith, the new Minister of Works and Buildings.

Bradford Cathedral.

THE Council of Bradford Cathedral has decided to ask Mr. Edward Maufe, A.R.A., to prepare sketch plans for new vestries and baptistery.

University College, Dublin: Extension.

A LARGE building scheme in the extension of University College, Dublin, is likely in the New Year. The Eire Government is to provide the money. The Government has taken over the College of Science building, and as compensation for this the Government is prepared to build an extension of the present building along Hatch-street. The new building is likely to cost about £400,000.

A New City Sheriff.

THE Lord Mayor presided on December 18 over a Common Hall, called to elect a sheriff for the City of London in place of Mr. G. Percy Trentham, who was killed in a recent air raid. Mr. Horace Boot, Citizen and Cutler, was elected to fill the vacancy. Mr. Boot is President of the National Federation of Clay Industries.

District Surveyor for Lewisham.

LEWISHAM BOROUGH COUNCIL have received a letter from the London County Council notifying that Mr. T. R. L. Gibson, District Surveyor for Lewisham East, 7, Catford-road, S.E.6, will act also as District Surveyor for Lewisham West until further notice, in consequence of the retirement of Mr. A. H. Verstage, District Surveyor for that district.

Resignation of L.C.C. District Surveyor.

MR. R. B. LING, District Surveyor for Camberwell North, has resigned from the London County Council's service on the grounds of ill-health. In making this announcement the Town Planning Committee states that in addition to his duties under the London Building Acts, the Town and Country Planning Act, 1932, and other statutes, Mr. Ling, from the beginning of the war until the end of June, 1940, rendered valuable assistance in connection with the rescue work in London.

IN 1915.

EXTRACT FROM *The Builder*, DECEMBER 24.

CHRISTMAS, 1915.—"We hope that the passage of another year will enable us to see the normal Christmas conditions revived in a world settling down to a long era of peaceful development and progress. . . . As time goes on we shall more and more remember the good wrought out of evil, the deeds of heroism and endurance, the historical meaning of what may well be the last great world-war. . . ."

COMING EVENTS

Tuesday, December 31.—Housing Centre. Luncheon. Miss Amy Sayle on "Billeting War Workers." 1 p.m.

Tuesday January 7.—Institution of Structural Engineers (Scottish Branch). Sessional Meeting.

PRINCIPAL CONTENTS

ARTICLES	Page
IMPROVISATION	613
WESTMINSTER ABBEY: INJURY CAUSED BY ENEMY ACTION. By J. G. Noppen	616
LOUIS SULLIVAN AND THE CHICAGO AUDITORIUM ...	617
CORRESPONDENCE	623
TOWN PLANNING INSTITUTE: PRESIDENTIAL MESSAGE ...	624
RAPID CONSTRUCTION OF HUT CAMPS: AN ALL-CONCRETE SYSTEM	625
NEWS OF FORTHCOMING CONSTRUCTION	628-9
WAGES, PRICES OF MATERIALS...	630-2

ILLUSTRATIONS	
WEST LOTHIAN COUNTY BUILDINGS. By Dick Peddie, Todd and Jamieson	618
HOUSE AT STOKE POGES. By Tubbs, Duncan and Osburn ...	621
OFFICES, MARYLEBONE-ROAD. By Gordon Jeeves	622

WAR DAMAGE INSURANCE

CHANCELLOR OF THE EXCHEQUER ON THE NEW BILL.

SIR K. WOOD, Chancellor of the Exchequer, moving in the House the second reading of the War Damage Bill, said that the Bill concerned vast interests as well as being of moment to almost everyone. It affected property which, as regarded buildings alone, had been variously estimated at the value of between £6,000,000,000 and £8,000,000,000, apart from land which the Government had decided should also be the subject of restoration and compensation.

The amount of contribution had been fixed at 2s. in the £ for each of five years to cover the period from the beginning of the war to next August 31, when the whole matter would again be reviewed and determined by Parliament. In the case of agricultural properties the rate was fixed at 6d. in the £ in recognition of the fact that so large a proportion of the annual value was attributable to the land rather than to the buildings. Some might say that those contributions were too heavy, even though payment was spread over five years, but according to the provisions of the Bill, if the damage was less than the estimated product of the contributions, Parliament would be asked to ensure that any excess of the contributions was used for the benefit of the property owners—in some such way as by giving credit for them in any future risk period. If the contributions were too small the State then was to give assistance.

He did not propose to deal with all mortgages, but only with those granted for the acquisition of a particular dwelling-house or farm with a Schedule A assessment not exceeding £100 and £250 respectively. He proposed that if the mortgage exceeded one-half the pre-war value of the interest mortgaged, but did not exceed three-quarters of that figure the mortgagee should bear one-third of the contribution and if it exceeded three-quarters of the pre-war value of the interest mortgaged, the mortgagee should bear two-thirds.

While contributions would not be levied on places of public worship, hospitals and almshouses, other charitable institutions would be charged at one-third of the normal rate for buildings; the right to compensation paid by the State would not be absolute, but the Treasury would confer with the authorities concerned with a view to reaching a reasonable solution of their difficulties and providing a fair settlement. It might be possible, for instance, in the case of religious bodies, to agree to meet their needs by a total sum, which need not be applied for replacing exactly what had been destroyed, or for rebuilding on the same site.

If one viewed the area on which bombs had fallen it was remarkable how few had been the buildings completely destroyed as compared with the number of properties which had been partly damaged. Those slightly damaged greatly preponderated. The number of cases of comparatively minor damage, costing less than £50 to make good on claims to date, was a large proportion of the whole.

In deciding whether compensation should be paid at once in any particular case the War Damage Commission would act on the advice of the Departments concerned. Every owner of a damaged or destroyed building would receive at such time as was in conformity with the national interest his actual cost of repairs or receive its pre-war value in cash. In the cases of total loss the payment would be made after the war, and meanwhile interest would accrue at 2½ per cent. In cases where people entitled to compensation desired to buy or rent other premises, provision was made for advances up to £500 against the ultimate payment. The Government would do their utmost to expedite the presentation of their proposals in regard to public utility undertakings, railway, dock, gas, electricity,

and water undertakings, to which the scheme was to apply at a later date.

For private chattels a voluntary scheme was necessary because it would be inequitable and impractical to found a compulsory scheme on existing fire insurance valuations chosen at the instance of the person taking out the insurance. Mutual insurance schemes would be prohibited from insuring against war risks except in respect of property or loss not covered by this Bill or the War Risks Insurance Act, 1939, or in respect of goods which though otherwise falling within the Commodities Insurance Scheme were not compulsorily insurable under that scheme.

All the provisions for payment of compensation under all these new schemes were retrospective.

WESTMINSTER ABBEY

INJURY CAUSED BY ENEMY ACTION

By J. G. NOPPEN, F.S.A.

It was, perhaps, too much to hope that Westminster Abbey, set in the midst of buildings which are doubtless a constant objective of enemy aircraft, would entirely escape damage, and some injury has, unfortunately, already been inflicted upon it.

The first part of the church to suffer was the big west window, the glazing of which has been perforated by a shower of fragments with such impartiality that very few lights remain whole. The glass is of eighteenth-century date, and whilst not as valuable as mediæval work is of interesting character. The window itself is an important feature of the church, and the late W. R. Lethaby has shown that it was almost certainly designed by Master Henry Yevele, the master mason in charge of the rebuilding of the nave during the latter part of the fourteenth century, though it was not actually built until some years after his death. The stonework of the window seems to have escaped injury, a fact for which we may be duly grateful. Lethaby also drew attention to the resemblance between the Westminster window and the west window at Winchester, which was built by Master William Winford, who was working with Yevele in 1370.

The principal damage suffered by the church was the result of a bomb which fell in Old Palace-yard. The effects of this were considerable; but by no means so serious as might have been expected, and the staunch old fabric stood up to the attack very well.

The brunt of this explosion was borne by the eastern end of King Henry VII's Chapel, and some injury to the masonry was caused. Two or three of the stone mullions and transoms are broken, and damage has also been done to the parapet on the east. Practically all the glass is gone from the windows, but the interior has suffered only slight injury.

Two of the bosses forming the terminations of the central pendants of the vault have been detached, and minor injuries to the monuments of the Duke of Buckingham and Dean Stanley have been caused. The latter is no more serious than a chip off the nose of his effigy.

The glass is probably the chief loss. In the east window of the eastern apsidal chapel were a number of panels containing arms and heraldic badges of early sixteenth-century date, remnants of the original glazing of the chapel. King Henry VII provided in his will for the glazing of his chapel, which was to include "stories, images, arms, badges and cognisants." The glazing was the work of Barnard Flower, the King's chief glazier, and must originally have greatly resembled that of King's College Chapel, Cambridge, which was in part the work of Barnard, but was finished by Galyon Hone, who succeeded him as King's glazier. Of all this splendid glass only a few fragments remained before the bombers came. Now there is none, except for three or four small panes in the west window which have miraculously escaped.

Westminster Abbey has been particularly unfortunate in respect of its glass. The whole of the church was originally furnished with contemporary glazing, the eastern arm having been glazed during the latter half of the thirteenth century, the work following promptly on the completion of the stone fabric. Three thirteenth-century shields: *England, Provence* and that of *Richard of Cornwall*, and a few fragments which had been set up in a window in the west aisle of the north transept, were removed to safety after the outbreak of war, as also were the priceless early thirteenth-century panels from the north window of the Jerusalem Chamber. These fragments we may hope again to see in the windows of the church.

Nearly all the plain glass in the windows of the eastern arm of the church has been broken, and several of the new windows in the nave aisles have been damaged. The chapter house windows on the north and east have also been injured. The glass in the chapter houses was never an asset to the building. It allowed a very limited quantity of light to pass through it, and the remarkable paintings which adorn the inner walls have therefore never been seen to advantage since it was first put in.

The eighteenth-century glass in the north rose-window has also been damaged by flying fragments, but this had previously been mutilated when the masonry of the window was "restored" by Pearson some fifty years ago. The glass was then cut to fit the new lights, an astonishingly stupid act.

Up to the time of writing—for one never knows what the future has in store—it may be said that the Abbey Church has been fortunate. The main fabric remains intact, and the valuable monuments are still whole and sound. And when we think of this let us not forget that it is largely due to the incomparable skill and courage of our airmen, and I welcome this opportunity of paying a small tribute to them.

Westminster School buildings, which adjoin the Abbey, have in one instance been less fortunate. The building concerned is the Busby Library, which serves when the school is at home as the VIIth Form room. This was built during the third quarter of the seventeenth century, and though it is little known to the public and has rarely been mentioned in print, it was a beautiful and interesting chamber. It lies to the east of the lobby leading "up school"—that is, to the great room which was originally the monks' dormitory, and its big window looks out upon the ancient college garden.

The library was built by Dr. Richard Busby, who was educated at Westminster (King's Scholar) and Christ Church, Oxford. He became headmaster of Westminster in 1638, and held that position until he died on April 5, 1695, at the age of 88. He had ruled Westminster for nearly fifty-seven years. Christopher Wren and John Dryden were among his pupils, and others were John Locke and Judge Jeffreys.

One of the most striking features of the room was its fine plaster ceiling, which had a large saucer dome in the middle and a small dome in each corner, with rectangular panels between the latter. All these were enclosed by foliage and cherubs' heads. The cornice was decorated with acanthus leaves. This ceiling is almost wholly destroyed, all that remains in place being the two small domes with the rectangular panel between them on the south side. The contemporary bookcases on the east and west walls and the two original tables have also been injured, and the books, though not destroyed, have not escaped scot-free. It may be that the room can be in some measure restored; but to those who knew it in the days that are gone it can never be the same; the atmosphere will be different.

No injury seems to have been done to the nearby eleventh-century dormitory, but a slight scar may be seen on the south-west corner of the so-called Litlington Tower, which stands on the north of the Busby Library. A few panes of glass have been broken in the windows of the houses on the south side of Little Dean's Yard, and in Ashburnham House on the north side.

It may be worth while to mention another interesting room occupied by the school, which opens eastward from the old dormitory at its north end. It is above the Chapel of St. Dunstan. Substantially it is of early sixteenth-century date, and has an oak door frame with a four-centred arch of that period. The roof also is largely original and has moulded tie-beams and wall-plates. Its east window and fireplace are of the eighteenth century.

The same bomb which injured the Chapel of King Henry VII, destroyed the tracery and glass of the big Victorian Gothic window on the north side of Old Palace Yard. This window does not belong to the Great Hall of King Rufus, though it lights it through a big arch which has replaced the hall's former south wall. Between the window and the arch opening into the Hall is a vestibule which occupies the site of an old chamber which formerly connected the Great and Lesser Halls, the latter, until destroyed by the fire of 1834, serving as the House of Lords. It was under the floor of this room that the fire began.

Without indulging in too much optimistic satisfaction, we may be thankful that the Abbey and adjacent buildings have suffered no more than the superficial injuries above described, and for the future we can only hope.

Cement and Increased Production.

In a published statement, Mr. Hugh Beaver, Priority Officer and Controller of Building Materials in the Ministry of Works and Buildings, has stated that action is being taken to increase cement production. "We are preparing for every conceivable eventuality," he said. After referring to the difficulty and delay involved in constructing modern cement factories, Mr. Beaver said that they were finding other ways of increasing production, if required, by varying the type of cement—by using, for instance, blast furnace slag cement—and still keeping it above the standard specified by the Government.

LOUIS SULLIVAN AND THE CHICAGO AUDITORIUM

FRANK LLOYD WRIGHT'S REMINISCENCES

To mark the 50th anniversary of the Chicago Auditorium, the Chicago Art Institute staged an exhibition of the work of Adler and Sullivan—especially of the Auditorium which, the *Architectural Forum* (from which the illustrations and letterpress given on this page are reproduced) describes as "an architectural milestone."

At the time Frank Lloyd Wright was a junior draughtsman serving the man he has always called "master"—Louis Sullivan. Here are Lloyd Wright's reminiscent impressions:—

The Auditorium was the largest and most important commission Adler & Sullivan, or any architects in America, had had up to that time. The building became famous before it was completed.

We used to call Dankmar Adler "Chief" in those busy days when the Auditorium was building, and he stood squarely in the midst of the great turmoil, solidly dominating the whole building process, from the trenches where the footings were going into a floating foundation to the great trusses that later spanned the greatest room for opera the world has ever seen.

Contractors would take a drink before they came to "get it" from the Chief. I've heard him take one of them on as a mastiff would pick up a rat, shake him and drop him. I've seen them red-faced and perspiring leaving his little place next the outer office, mopping their brows, but jacked up to better work and more of it. Or perhaps condemned to tear out what they had done and do it over again as he had told them to do it in the first place. Most of the profit gone out of the job because they had tried and failed to fool the Old Man. These would be green ones. Those who knew him feared and respected him mightily. He was master of their craft and they knew it. His bushy brows at that time almost hid a pair of piercing grey eyes. His square grey beard and squarish head seemed square with the building, and his personal solidity was a guarantee that out of all that confusion would issue the beauty of order.

During that constructive war time I've heard Louis Sullivan's cry of "Adler! Adler!"—the cry rising every now and then in emergency appeals to the chief. In emergencies, not only *lieber meister* but all of us always turned to Adler. "Adler!" was the common cry in the draughting room as on the works. And Adler never failed anybody. We used to

THE LATE LOUIS SULLIVAN.

feel him back of us just as the gangs on the building did. He would range up alongside the boards and put a heavy point straight without hesitation. At other times he would ponder, with a guttural growl, and invariably come out with what was needed to straighten out the problem. And tough problems were coming up every day in and day out for years.

Sullivan, designing partner, was novice in those days. The respect of the two partners for each other—and affection, too—seemed unbounded. Adler, master of that particular plan for the Auditorium, was Sullivan's best critic, and his judgment quietened and strengthened greatly the final result.

Adler himself had never developed the facility in design naturally possessed by Sullivan, but Sullivan himself at that time had no such grasp of building technique as was necessary to build this vast complicated building, and had acquired no power at all over either the men building it or the men owning the enterprise.

The Chicago Auditorium was entirely Adler's commission and more largely Adler's own building than Sullivan's—where its constitution and plan were concerned. The dramatic expression of the interior was Sullivan's; and that of the exterior, Richardson's influence, I should say, except the square tower developed by Adler's criticism, and, after the footings were already in, raised by Sullivan to a more dominating mass. This tower was the best feature of the outside, the one causing most trouble and receiving most careful study from both men. They were both satisfied with it, but the additional height caused serious settlement that never ceased to worry the Chief.

The receding elliptical arches spanning the great room were the best feature of the interior, and they were a development by Sullivan of Adler's invention of the sounding board or sloping ceiling above the proscenium; it had marked all Adler auditoriums before he took the young genius Sullivan in.

Most of this work in planning the Auditorium took place in the Borden block, now destroyed, but long before the opening we all moved into the new offices in the tower, where we were in constant touch with what went on below, an industrial world under a great architect.

Stagecraft has not advanced much since that day. Adler's Auditorium stage would stand up with the best stages in the world to-day. Acoustics were Dankmar Adler's speciality. There is no house in the world equal to the Auditorium in that respect. Among all the theatres built by Adler, and later by Adler and Sullivan, there were no failures acoustically.

A pity that the great room should not now be the Chicago home of grand opera!

THE CHICAGO AUDITORIUM. FROM THE ORIGINAL PERSPECTIVE.

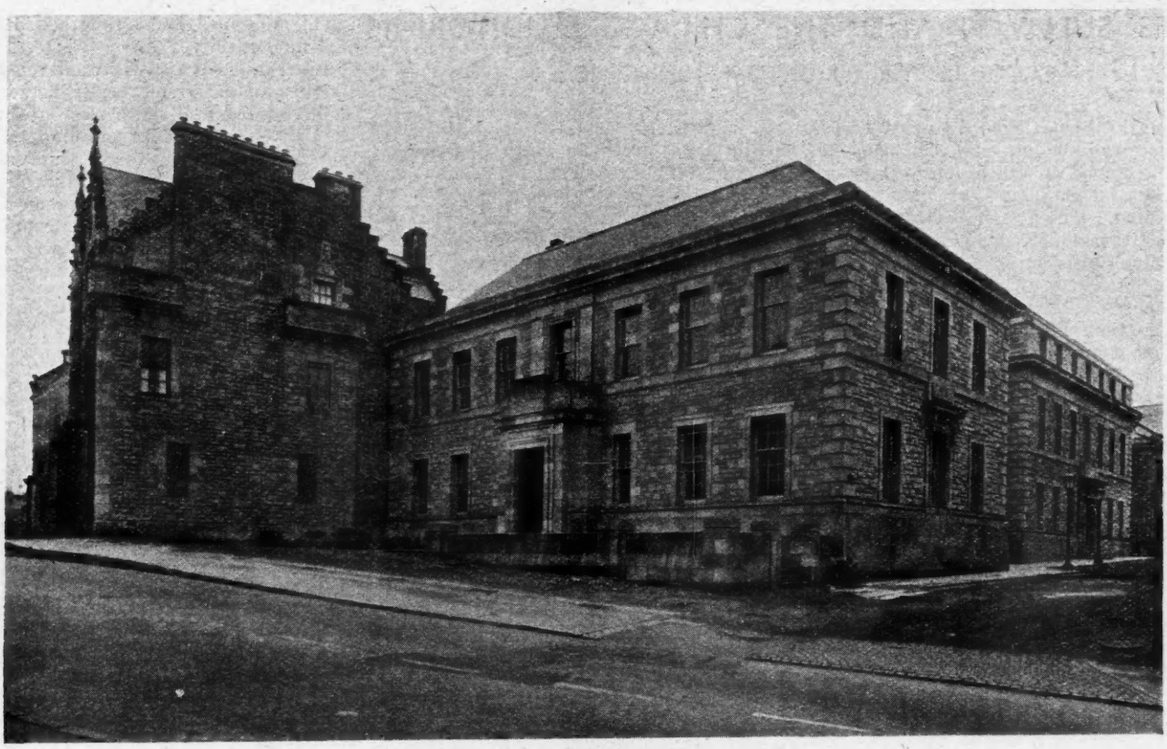
R.I.B.A.

Membership.

The following members have been elected :—

As Associates.

Miss E. S. Aglen (Univ. of Cambridge and Polytechnic, Regent-street, W.1) (Alyth, Perthshire).
O. C. F. Carey (A.A.) (Wareham, Dorset).
Capt. W. W. Chapman, R.E. (Polytechnic, Regent-street, London) (London).
J. N. Clark (Morpeth, Northumberland).
R. E. W. Cooper (Orpington, Kent).
T. C. R. Eaton (Gillingham, Kent).
R. H. Fox (Cardiff).
L. E. Gregory (Univ. of L'pool) (Blackpool).
F. M. Jones, B.Arch. (Univ. of L'pool) (L'pool).
T. H. Lodge (Leeds Sch. of Arch.) (Brighouse, Yorkshire).
J. S. Œxle (Loughton, Essex).
B. D. Palmer (B'ham Sch. of Arch.) (Sherbourne Hill, near Warwick).
Miss A. M. Radford (A.A.) (Potters Bar, Middlesex).
A. L. B. Raven (Univ. of L'pool) (Shrivenham, near Swindon, Wilts).
G. Robson (A.A.) (Dudley, Worcestershire).
L. T. J. Smith (London).
S. E. Tong (Winchester, Hants).
R. H. Treleaven (Isleworth, Middlesex).
K. L. Wightman (B'ham Sch. of Arch.) (Birmingham).



THE NORTH ELEVATION TOWARDS THE HIGH STREET.

WEST LOTHIAN COUNTY BUILDINGS, LINLITHGOW

MESSRS. DICK PEDDIE, TODD & JAMIESON, ARCHITECTS.

The West Lothian County Buildings which we now illustrate have been architecturally grouped with the existing Sheriff Court buildings and the Police Headquarters, the latter being still under construction. To serve these a new access roadway has been formed.

TREATMENT.—The portion of the site occupied by the County Buildings, being very elongated, has two principal elevations, facing west and north, the latter being towards the High-street. When the old buildings in the High-street were demolished, the new building line was fixed considerably further back. The space thus thrown open has been utilised as a paved forecourt bounded by a parapet wall and approached by steps from the pavement. The setting back of the building line resulted in the exposure of the gable of the British Linen Bank; by arrangement with the directors of the Bank the opportunity was taken of finishing the gable in stone.

The County Buildings are planned in three blocks; the centre block contains three storeys while the north and south wings have only two. In the portion of the north wing next the street, however, there is a basement containing the boilers for the heating system with coal storage and also a large store. The architects have designed the elevations in an orthodox Renaissance style. The external walls are of stone, the rubble work being from the well-known Craigleith Quarry, and the hewn work from Darney Quarry in Northumberland. The blending of rubble and hewn stone has turned out to be a very happy one, and with its slated roof of mixed green shades from Westmorland, has fitted well into the character of the town's architecture.

PLANNING.—The building is simply and conveniently planned. The main entrance is situated in the centre of the long west elevation and leads through a revolving door to the main entrance hall and main staircase. From the entrance hall run wide corridors to the north and south.

The centre block, ground floor, is occupied by the County Clerk's Department with private rooms for the County Clerk and the Deputy County Clerk. The County Clerk's room is finished in oak with specially designed oak furniture. Adjoining the entrance is situated the inquiry room in which is placed the telephone exchange. The north end of the ground floor is occupied by the Public Rates and Motor Licence Office. The centre doorway in the north elevation, entered from the forecourt, leads through a revolving door directly into this office. The centre portion—a public space 30 ft. by 25 ft.—is floored with marble and is bounded on either side by mahogany counters. The finishings and furniture of the public space are entirely of polished mahogany. Heating is by "ray-rad" panels let into the ceiling. The Cashier's Department is conveniently situated immediately adjoining the Public Office. The corridor leading southward from the main central entrance hall leads to the Public Assistance Department, the Rent Collector's room and to the Medical Officer's Department. This last department has a separate external entrance.

The centre block on the first floor is occupied by the Council Chamber and the Committee Room. The former, being the principal apartment in the building, is placed centrally and is entered from the wide landing at the top of the main staircase.

A dignified apartment, measuring 49½ ft. by 28 ft., it is panelled to a height of 9½ ft. in walnut. The panels are in quartered veneer. Also notable are the carved walnut overdoors. The furniture of this room has also been specially designed by the architects. Like the walls it is in walnut with quartered veneered panels and cross-banding of Zebrano wood. Contrast between the walls and furniture is obtained by different finishing treatment, the former being waxed while the latter is french-polished.

The dais is situated at the north end of the chamber and is provided with chairs for the chairman and other officials. There are desks and chairs for 52 councillors, benches for the public and accommodation for other officials and reporters. The heating and ventilating of the Council Chamber has been specially considered. Besides the radiators under the windows, which are concealed behind specially designed metal grilles, there are "ray-rad" panels in certain of the ceiling panels which combine with the air-conditioning scheme. The Committee Room is *en suite* with the Council Chamber and is panelled dado height in cedar. In both these rooms a special plaster for acoustic purposes has been employed. The remaining accommodation on this floor may be studied from plan.

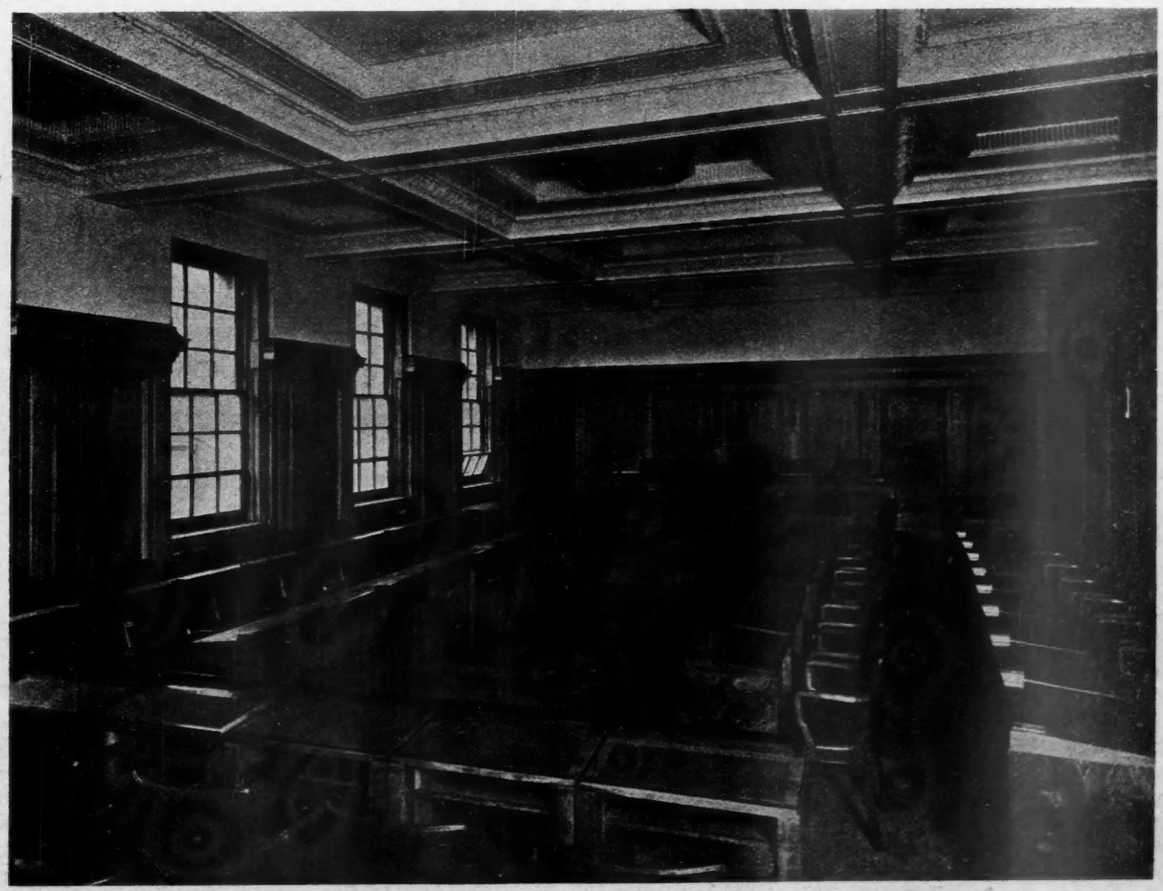
The second floor, as previously stated, is in the centre block only and is chiefly occupied by the County Architect's Department. Considerable storage space is provided in the roof.

FINISHINGS.—The finishings of the principal apartments in the central block, apart from the Council Chamber, which has already been described, are in oak, while, generally, the timber used is cedar. Teak has been used for the doors and finishings at the two principal entrances. The floors of the main corridors are finished in "Lintile."

GENERAL.—Ample lavatory accommodation is provided on each floor. The walls of the lavatories are lined with "Vitrolite" of a pale green colour. A passenger lift is installed adjoining the north stair. Joined to the main building at its south end is a four-apartment house for the caretaker. This adjunct also contains delivery rooms on each floor to the Supplies Department with a hand-operated lift.

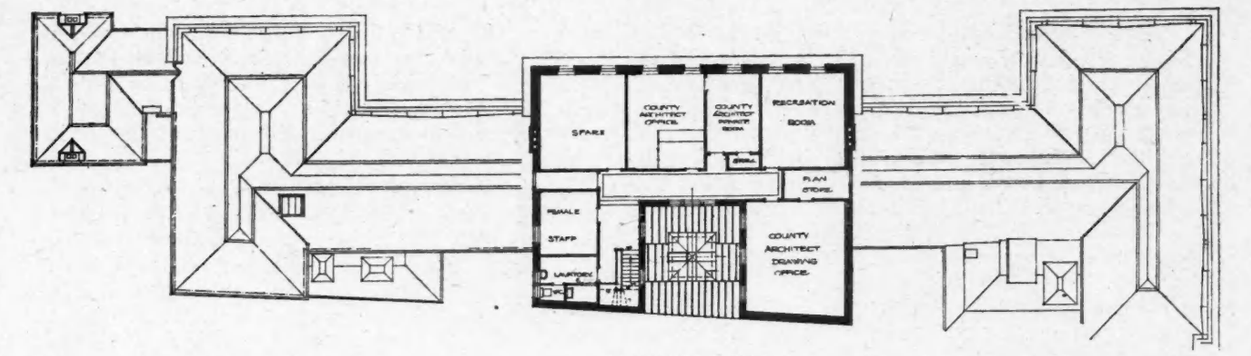
After the demolition of the old buildings on the site was completed, it was found that the subsoil was of a very unsatisfactory nature, running sand being found in parts. The foundations had, therefore, to be specially designed. During this period and for some time afterwards, the Council were fortunate in having the services as clerk of works of Mr. John Grieg. After Mr. Grieg left to take up another appointment, Mr. John Dickson was appointed to this position in January, 1939, and the work has been completed under his able direction. The cost of the building and furnishings will be upward of £50,000.

The schedules of quantities were prepared by Messrs. Peter Lawrence & Co., F.S.I., and the main contract—excavator, brick and masons' work—was executed by Messrs. Thomas Millar & Co., Ltd., of Leith.

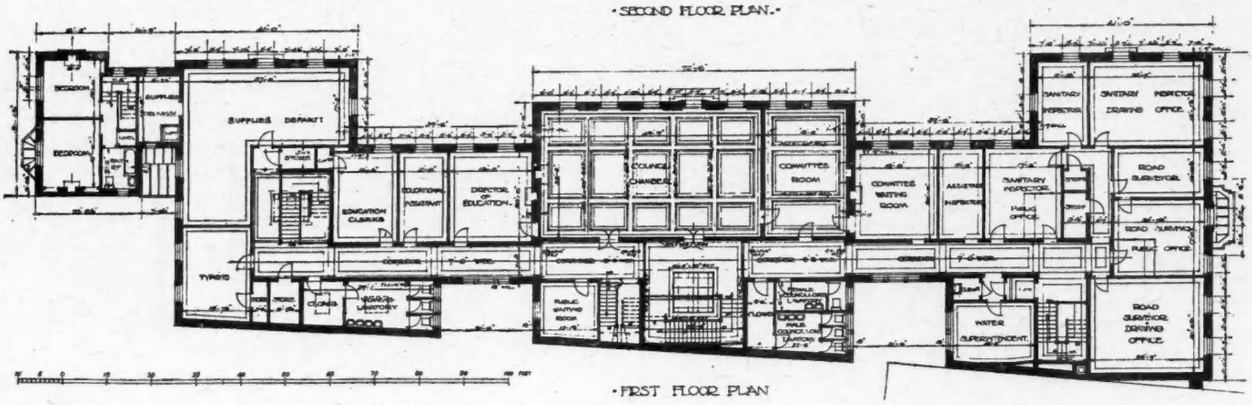


THE COUNCIL CHAMBER.

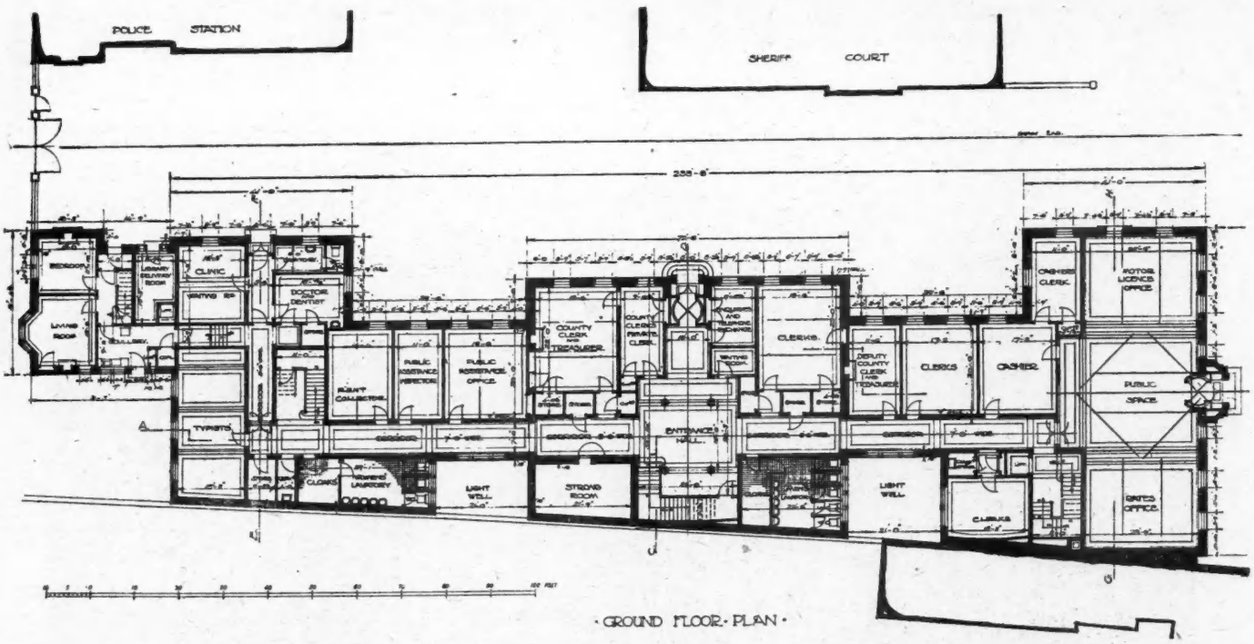
WEST LOTHIAN COUNTY BUILDINGS. MESSRS. DICK PEDDIE, TODD & JAMIESON, ARCHITECTS.



·SECOND FLOOR PLAN·



·FIRST FLOOR PLAN

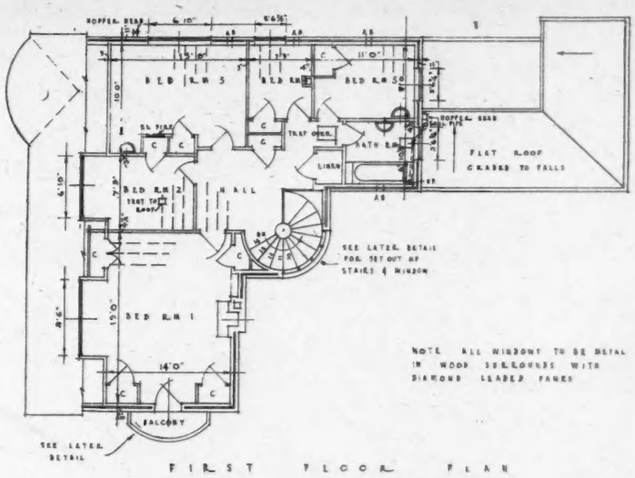


·GROUND FLOOR·PLAN·

Sub-contractors were: Carpenter and joiner work, Nathaniel Grieve, Edinburgh; structural steelwork, P. & W. MacLellan, Ltd., Glasgow; reinforced concrete work, Williamson Brothers, Kirkintilloch; glazier work, Cunningham, Dickson & Walker, Edinburgh; slater and roughcast work, Peter Kelly & Son, Ltd., Edinburgh; plaster work, George Rome & Co. (Glasgow), Ltd., Glasgow; glass lining of walls, James Thow, Ayr; marble work, Galbraith & Winton, Glasgow; plumber work, Thomas Matheson, Polmont; ironmongery, Bell, Donaldson & Co., Edinburgh; heating system, Ashwell & Nesbit, Ltd., Glasgow; fire extinguishers, Minimax, Ltd., Glasgow; electrical work, Greig Brothers, Bathgate; lifts, Express Lift Co., Northampton; stone carving and modelling, Donaldson & Burns, Edinburgh; mantelpieces and grates, James Gray & Son, Edinburgh; steel windows and patent glazing, McLean & Co., Glasgow, Henry Hope & Sons, Birmingham, and Fredk. Braby & Co., Glasgow; safe doors, John Tann, Ltd., London; internal telephones, Dictograph Telephones, London; staircase railings and radiator grilles, McDonald & Creswick, Edinburgh; council chamber furniture, J. &. T. Scott, Edinburgh; county clerk's room furniture, Scott, Morton & Co., Edinburgh; general office furniture, Patrick Thomson, Ltd., Edinburgh; steel shelving, Roneo, Ltd., Edinburgh; steel filing cabinets, Art Metal Co., Edinburgh; painter work, Dobie & Son, Ltd., Edinburgh; time clocks, Magneta Time Co., Glasgow; floor coverings to corridors, John Broadfoot & Sons, Ltd., Glasgow; linoleum and carpets, C. & J. Brown of Newington, Edinburgh; and blinds, John Bryden & Sons, Ltd., Edinburgh.

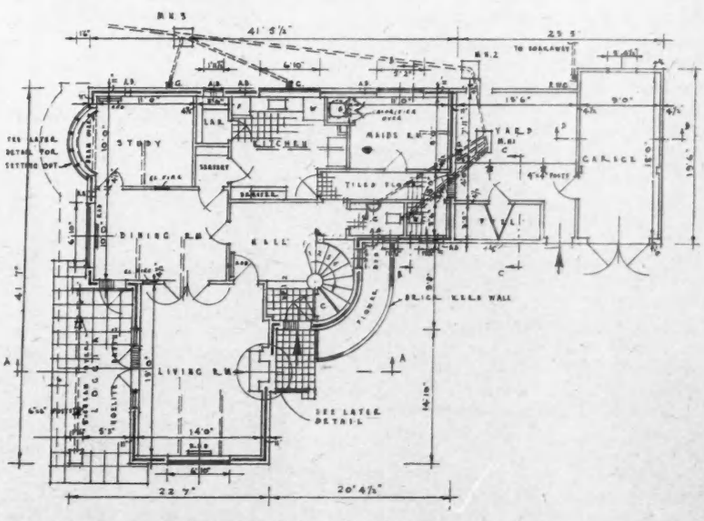
WEST LOTHIAN COUNTY BUILDINGS. MESSRS. DICK PEDDIE, TODD & JAMIESON, ARCHITECTS.

THE ENTRANCE FRONT.


BED RM 3
BED RM 2
BED RM 1
HALL
FLAT ROOF GRADED TO FALLS
SEE LATER DETAIL FOR SET OUT OF STAIRS & WINDOW
NOTE ALL WINDOWS TO BE METAL IN WOOD SUBFRAMES WITH DIAMOND LEADED PANES
BALCONY
SEE LATER DETAIL

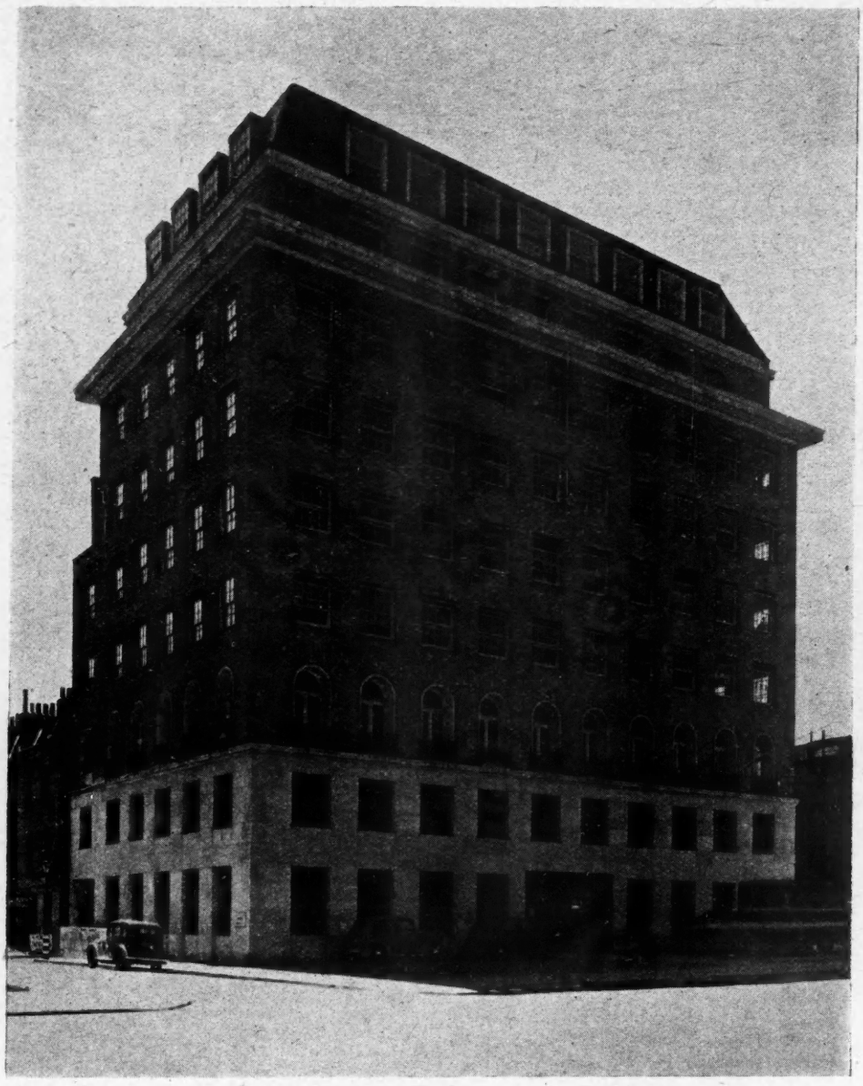
FIRST FLOOR PLAN

"STOKE THATCHERS": A HOUSE AT STOKE WOOD, STOKE POGES.



GROUND FLOOR PLAN

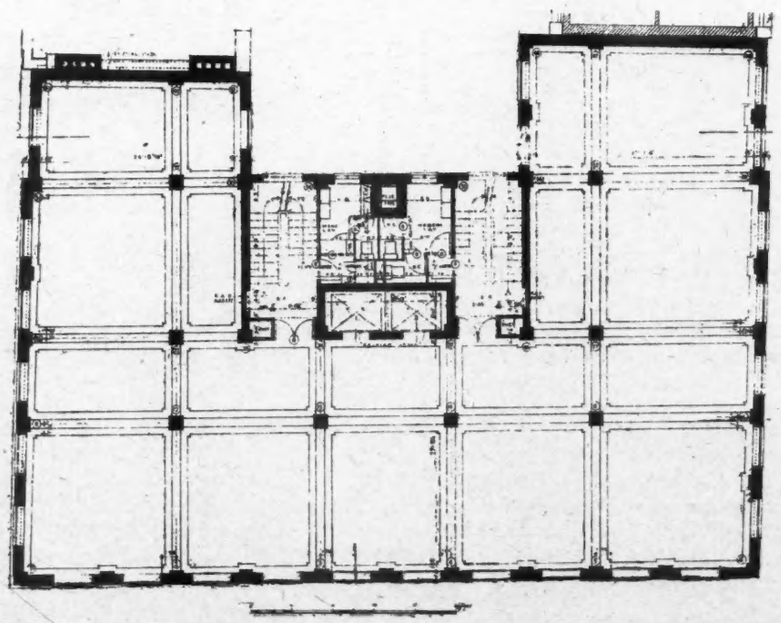
MESSRS. TUBBS, DUNCAN & OSBURN, AA.R.I.B.A., ARCHITECTS.



GENERAL VIEW.

A BLOCK OF OFFICES IN THE MARYLEBONE ROAD, W.

This block of offices has recently been completed on a site at 129-137, Marylebone-road, from plans by Messrs. Gordon Jeeves. The building has ground, mezzanine and seven upper floors, besides the basement. The building generally is brick-faced on a steel frame, the ground and mezzanine storeys being faced with stone. The roof is mansarded. The general contractors were Messrs. E. Pollard & Son, Ltd.



Right: TYPICAL FLOOR PLAN.

MESSRS. GORDON JEEVES, ARCHITECTS.

CORRESPONDENCE

[While we are glad to publish letters on professional and other matters of interest to our readers, it must be understood that we do not necessarily endorse the remarks of correspondents, who will oblige us if they will express their views as briefly as possible.]

The Use of Architects and the R.I.B.A.

TO THE EDITOR OF *The Builder*.

SIR,—In the letter written to you on the above subject by Messrs. F. W. Andrews and F. G. Wisch Husen, I feel that their efforts again to have responsible architects placed in a "reserved" category should receive every attention and be given the whole-hearted support of the R.I.B.A. and of the A.A.S.T.A. The latter body have proved by their practical ideas that they are unfettered and are not governed by "old Fellows," who so often speak not with judgment but with a personal bias against any measure which might affect their pockets, rather than thinking broadly along lines likely to be of service to their profession and to the general public.

In bombed areas qualified architects would be an untold blessing in many cases—I can speak with feeling on this subject, for as an architect employed by a local authority I have had to survey, issue orders and superintend over 3,000 damaged properties—and I know the work entailed even with the assistance of certain clerical staff.

Let the R.I.B.A. face facts: architects, of whom there are probably 20,000 qualified men, including at least half of this number unfitted for active service because of age or other bars, would be of great service in connection with reconstruction and in the observing of weaknesses arising out of war-damaged properties in their construction, and thus learning that such methods should not be used again in future planning.

Let the R.I.B.A. move now—quickly—despite its greybeards, and let us have common-sense taking the place of "Fellowship control"!

G. ROBSON, L.R.I.B.A.

Dover.

Charcoal Production.

TO THE EDITOR OF *The Builder*.

SIR,—When reading *The Builder* of November 29 the article on the subject of the production of charcoal reminded me of a happy occasion almost a year ago when, in making my way heavily shod and lightly clothed through a mighty beech forest not more than ninety miles from Westminster, I chanced to come upon an instance of this old forest industry in its modern guise.

First there was the pleasant, undeniable aroma of burning beech, then faint trails of smoke in the distance, and before long I was in the midst of dozens of rectangular, galvanised-steel burning-units, each with its tall metal flue trailing white smoke over the tree-tops.

Charcoal-burning is certainly a more positive process and a less tedious task than it used to be. The timber is cut to convenient lengths, carefully stacked and fueled, then each stack is covered with a metal unit taking about four or five cubic yards of timber which is fired and converted into charcoal in about twenty-four hours.

The old charcoal-burner's method was to build a sort of clamp as large as thirty feet across and cover this with litter and sand. As in most of the old industries, charcoal-burning had its closely guarded secrets, among which were the placing of the firehole and knowing when and how to check the drive of the fire should the wind change. Four days of constant watching were usually necessary before water was poured down the flue, and the fire gradually subdued.

As I stood watching the deserted scene—it being Sunday—a young fellow emerged from a shack to introduce himself pleasantly as the watchman. He talked with me for some considerable time, telling me how difficult it had been for him, a Londoner, to accustom himself to the eerie solitude of nights alone in the depths of the forest two miles from the nearest cottage; how, one night, he was startled nearly out of his wits on being rudely awakened by an owl swooping round his tiny room; and how, on another night, he gave refuge to a fugitive from justice, and "hadn't the 'eart to split on 'im" when the police picked up his trail next day.

How the old charcoal-burners would have turned in their graves had they heard this "furriner" tell me that in peace-time he always found a job in London for the winter, and in the summer made for the seaside resorts, where he picked up jobs as a hotel-waiter. I left him stirring his dinner over a charcoal fire.

Now, after three months of the blasting of bombs and the sound of airplane engines, I like to think of the pleasant quiet of that distant beech forest, and to persuade myself that the carbon in my respirator is the produce of its noble timbers.

JAMES F. H. CHECKLEY.

Maidstone, Kent.

Concrete Construction: Investigation.

TO THE EDITOR OF *The Builder*.

SIR,—It is inevitable that concrete will play a greater part in building after this war than ever before, particularly in regard to house construction. In the past, proper consideration has not been given always to the best method of using concrete as a building material, and it has not been realised fully that tradition and ordinary experience are an insufficient guide if the best results are to be obtained.

In order to provide definite information and data to assist in future development, I am undertaking on behalf of the Cement and Concrete Association an investigation in regard to concrete structures, mainly at present of a domestic character—houses and flats.

The investigation is intended to cover as wide a field of experience as possible, and therefore a comprehensive list of buildings, without regard to merit, is necessary. It is in the compilation of such a list that I should like to invite the assistance of your readers.

Examples are required which have a concrete frame or have the external walls constructed of concrete in some form, either *in situ* concrete or precast concrete units. I might say that the Cement and Concrete Association have particulars of most of the examples of concrete construction which have been published in the professional and technical Press, but there are many other examples throughout the country which are not so well known.

I should be very grateful for a note of any examples which might be useful in the investigation, with the following information.

(1) Description of building, and, if more than one, approximate number;
(2) Location—sufficient information to enable example to be found;
(3) Owner, architect, builder, or other authority;
(4) Type of wall construction.

The date of construction and any other relevant information would, of course, be useful.

If any reader cares to let me have an opinion on any particular form of concrete construction and suggestions as to improvement, based on experience; these also would be very much appreciated.

A. G. BRAY, F.R.I.B.A.

Cement and Concrete Association,
15, Turl-street, Oxford.

Productive Capacity of the Lime Industry.

TO THE EDITOR OF *The Builder*.

SIR,—The attention of this Association has been called to certain misstatements with regard to the productive capacity of the lime industry which appear in an article, "Report on Shortage of Essential Materials," in *The Builder* of October 11.

In this article (page 363, column 1) the total productive capacity of the lime industry is estimated at 15,000 tons per week, and the actual production at not more than 7-8,000 tons per week. It is, perhaps, sufficient to point out that during the twelve months to July 31, 1939, 1,625,000 tons of all forms of lime were supplied under the Government's Land Fertility Scheme. Allowing for waste lime and ground limestone, the net figure of lime supplied in that year for agriculture alone would approximate to 1½ million tons. This level of demand has been maintained during the present agricultural season.

Further, very large tonnages of lime are required for industrial purposes for steel, chemicals, tanning, paper-making, textiles, beet sugar, water purification, and innumerable other uses, including building; and the addition of these tonnages to the agricultural supplies makes it safe to estimate the productive capacity of the lime industry of Great Britain at not less than 2½ million tons per annum—approximately 50,000 tons per week.

A. V. DALZELL, Secretary,
Central Association of the Lime and Limestone Industry of Great Britain.

Halifax.

[The statement referred to was made in a communication received from the A.R.P. Co-ordinating Committee.—ED.]

Deep Shelter Scheme, Glasgow.

THE proposal to construct an underground shelter to accommodate 13,000 people has been revived by the Glasgow Emergency Committee. It was agreed to make representations to the Government in favour of the scheme, which consists of constructing an underground shelter below Blythswood-square, and cutting two tunnels in a north-west direction which would serve after the war as relief traffic arteries. Mr. Thomas Somers, City Engineer, estimates the cost of construction at £250,000, and says that at least 12 months would be needed to complete the enterprise. He also expresses the opinion that there may be difficulty in obtaining suitable material and personnel.

THE TOWN PLANNING INSTITUTE

PRESIDENTIAL ADDRESS

THE current issue of the Journal of the Town Planning Institute contains the presidential address of Mr. O. A. Radley, LL.B., from which we take the following extracts :—

A year ago the Minister of Health in his Memorandum 1872 (1939) made suggestions with a view to preserving continuity and securing that full planning activity may be resumed without delay as soon as circumstances permit. It was indicated in the Memorandum that it would be necessary for authorities to continue to deal with such applications for permission to develop as they might receive in pursuance of the Town and Country Planning (General Interim Development) Order, 1933, or of an operative planning scheme as the case might be, and that any development which might take place during the war should be adequately guided. Planning Authorities were informed that the time limit mentioned in Articles 12 and 14 of the Regulations for adopting a draft scheme and making a scheme would be extended as might be necessary, and that for the time being no further local inquiries would be held with regard to schemes already before the Minister.

The Council of the Institute did not think the Memorandum went quite far enough, and I may remind you that on the instructions of the Council, the Secretary last November addressed to the Minister of Health and to the Minister of Transport a letter in which he informed the respective Ministers that our Council were convinced it was necessary to go rather further than this in order to enable the country to be ready to deal with the problems of unemployment and redistribution of population immediately the war ends. It was pointed out that for the reasons indicated in the letter, not only must plans be ready, but also land must be available for the right kind of development so that operations could begin immediately after the war, and it was suggested that the Treasury should be requested to lift its ban on the raising of loans by local authorities in respect of the necessary land purchases.

The Minister of Health, in his reply, stated that, while fully appreciating the importance of the matters referred to in the letter, he did not feel in the light of existing conditions that he could at that time go further in the direction suggested by the Institute than was indicated in the circular.

Research and Planning.

The Council of the Institute remained anxious that something further should be done, and at the meeting at which I was elected President it was decided to set up a Research and Planning Group with a view to co-operating with the 1940 Council in order to have ready a scheme for work immediately after the war. The Research Committee are proposing to investigate the changes in legislation required to enable such work to be carried out and the ways and means of getting over the difficulties inherent in the present system of local government, and some of the schools recognised by the Institute are carrying out research with a view to finding out what has to be done in order to make practicable the application of approved planning principles. The Research Committee have decided that their object should be to be able to say to the Government "that a certain form of development and reconstruction was recommended by your Royal Commission (the Commission on the Distribution of the Industrial Population); if it, with certain adjustments which we recommend owing to the situation produced by the war, is to be achieved, the following steps must be taken. If such steps are taken we can, when demobilisation takes place, find productive and hopeful work for many of those demobilised."

The Committee have already had several meetings, and, I hope, may be able to produce something really constructive.

The Government have recently announced the appointment of Lord Reith to report to the Cabinet as to the appropriate methods and machinery for dealing with the reconstruction of town and country after the war. Let us hope that every advantage will be taken of the opportunity which now presents itself for really bold schemes of redevelopment, and that the Ministry appointed will work in the closest possible co-operation with the Town Planning Authorities and the Ministry of Health. The Emergency Committee of the Council of the Institute have addressed a memorandum to the Government emphasising the immediate necessity for the appointment of a National Planning Authority to direct reconstruction and development, by whatever agency, public or private, it may be supervised or carried out.

It is quite impossible to envisage exactly the lines which town planning may have to take after the termination of hostilities. During the war it is, of course, our duty to do all in our power to keep the machinery of town planning in motion, to resist to the utmost any attempts to interfere with the provisions of schemes which have either been actually made or are in process of making, and for those of us who share the responsibility for the planning of particular localities to be ready with proposals to put in hand at once as soon as the time is ripe.

Need for a National Plan.

Apart from questions of detail, the question arises as to whether the whole conception of town planning schemes as envisaged by existing legislation is on right lines. The Report of the National Survey and National Planning Committee of our Institute, issued in May, 1938, suggested that a National Planning Commission should be set up with a view to compiling and collating all relevant information bearing on the use, development and planning of land from a national point of view, advising and co-ordinating Government departments in their use and development of land, providing planning authorities with constructive advice and guidance, and formulating a national plan or policy on broad and flexible lines for the allocation and distribution of major land uses and developments. The commission would have on its staff six to nine divisional officers, each responsible for one of the divisions into which the country would be divided. In each division a consultative committee would be set up consisting of the divisional officer as chairman and a limited number of unpaid members representative of the larger local authorities in the area.

This matter was also considered by the Royal Commission on the Distribution of the Industrial Population. The Majority Report of that Commission recommended the establishment of a new national authority for the purpose of making research into, advising upon and regulating the allocation of industry, but did not go so far as the Minority Report signed by Professor Abercrombie, Mr. Elvin and Mrs. Hichens, which recommended that all the town planning powers and functions of the Ministry of Health and the powers of the Ministry of Transport under the Restriction of Ribbon Development Act and the Trunk Roads Act should be transferred to the new Ministry which they recommended should be constituted.

While I must not anticipate the Report on Planning Legislation which is being prepared by the Town Planning Officers Section of the Institute, I understand that some of the members take the view that county borough councils and county district councils should cease to be the primary planning authorities, and that a regional board working under a National Planning Board should decide what combination of authorities would be appropriate for submitting a scheme for a particular area. If Parliament is not prepared to go so far it might be worth considering whether county councils should not be substituted for county districts, with power to delegate to a particular county district or number of districts, in combination, if desired, with one or more county boroughs. It would be advisable to make compulsory the town planning of the whole of their area by the county council, and I think it is generally recognised that compulsory town planning should be reintroduced. The objection that in practice it was difficult to enforce could now be got over by making the block grant under the Local Government Act dependent on satisfying the Minister that town planning was being satisfactorily dealt with throughout the area of the local authority. Some counties are too small to be able to operate satisfactorily, but they could be combined with an adjoining county for this purpose. Existing schemes now operative or before the Ministry for approval might constitute a difficulty, and provisions should be included in the amending Act for such schemes to be varied or amended in accordance with the wider powers to be conferred on town planning authorities and for schemes which relate to areas now recognised as too small, to be amalgamated with the schemes for adjoining areas.

Other matters of importance in connection with which the present legislation requires amendment are the practical exemption from town planning control now enjoyed by statutory undertakers and Government departments and the position with regard to interim consents. As regards the latter, there should certainly be a right of appeal by interested parties against the giving of consent to interim development by an interim development authority, just as there is against the refusal of such a consent. There is no doubt that in many parts of the country the ultimate value of schemes is being seriously prejudiced by consents given without adequate consideration of the effect they are likely to have, and, as the law now stands, there is no opportunity for anyone even to draw the attention of an interim development authority to any possible objections there may be.

There are, of course, a number of other defects which experience gained since the coming into operation of the Town and Country Planning Act, 1932, has revealed. These are being considered by the Research Group and the Town Planning Officers Section of the Institute, and I hope their reports will be available at an early date.

LAW REPORT

FALL IN AIR RAID SHELTER.

LEICESTER ASSIZES.
Before MR. JUSTICE OLIVER.

Mrs. E. E. Pratt v. Leicester Corporation and Another.

Mr. Justice Oliver, giving judgment at Leicester Assizes on November 4 in a claim for personal injuries brought by a woman who fell down the stairs in a public air-raid shelter, described the case as one which raised a question of very considerable importance. He awarded Mrs. Elsie Evelyn Pratt, a shoe machinist, £500 against Leicester Corporation.

It was stated that the Corporation had made alterations in the premises to make them suitable for a public air-raid shelter. The staircase had been built from the ground floor of a building to the cellar. The windows were obliterated. Mrs. Pratt, entering the building from the street, fell down the steps, and it was stated that her husband, who was with her, had to strike matches in order to find her. The firm on whose premises the shelter had been constructed were joined as defendants. The Judge found that they were not liable, and awarded them costs against the Corporation.

A stay of execution was granted.—*The Times.*

Operatives' New President.

Mr. Frank Wolstencroft, general secretary of the Amalgamated Society of Woodworkers, has been elected President of the National Federation of Building Trades Operatives, in succession to Mr. George Hicks, M.P., who resigned on his appointment as Parliamentary Secretary of the Ministry of Works and Buildings.

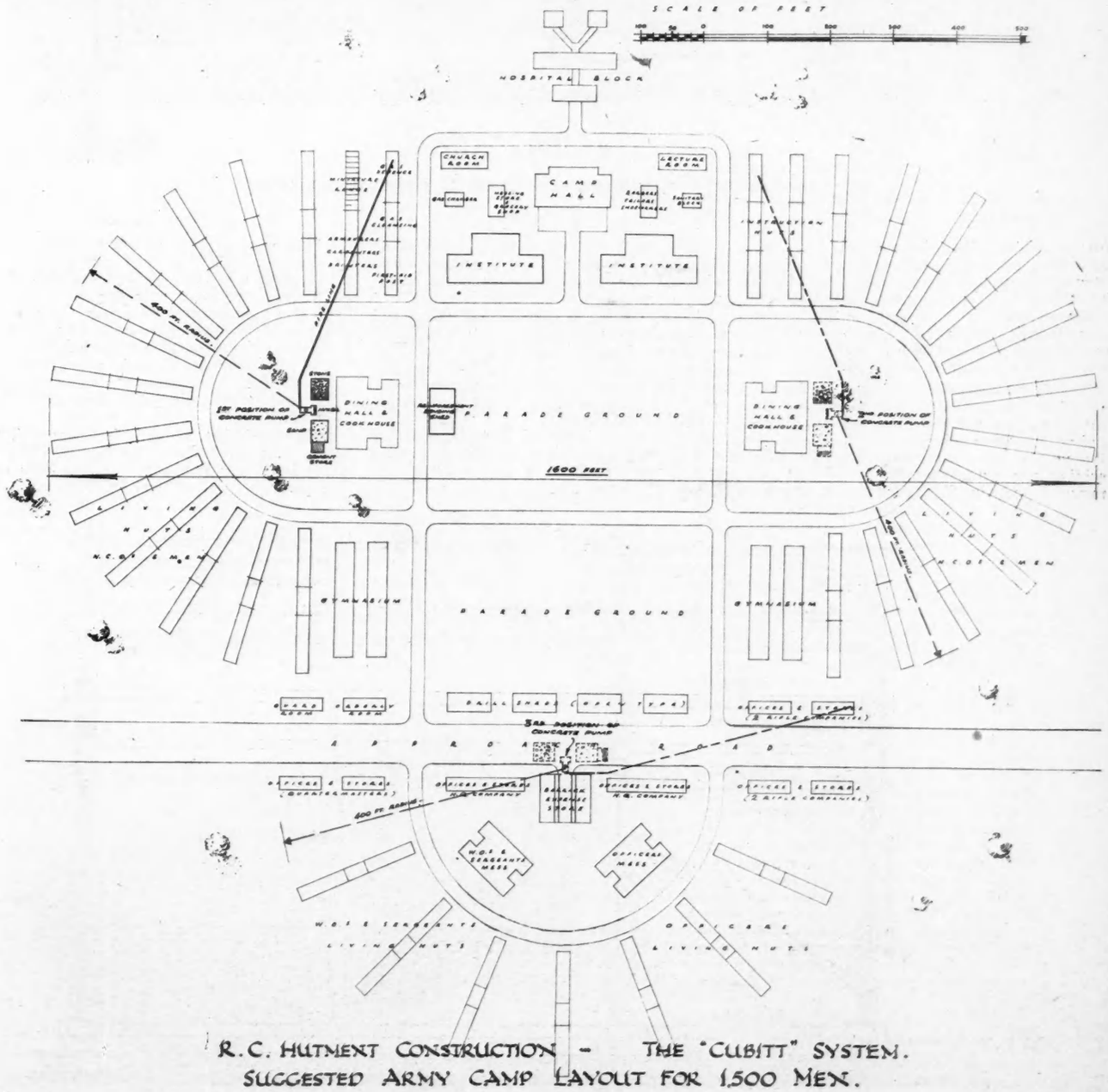
RAPID CONSTRUCTION OF HUT CAMPS.

AN ALL-CONCRETE SYSTEM.

A METHOD of constructing hut camps with the use of modern plant has been evolved by Messrs. Holland & Hannen and Cubitts, Ltd., in collaboration with their chief engineer, Mr. F. Snow, M.Inst.C.E., and is illustrated in the accompanying drawings and photographs. In addition to the rapid construction of camps for military purposes, the authors have kept in mind the idea of using the sites and buildings as holiday camps after the war and their adaptation for the reception of people leaving military or dangerous areas during the war. The plan embodies all the building requirements for 1,500 men. Fig. 1 shows the camp as arranged for military purposes. For use as a holiday camp the huts would be partitioned off as shown to the left of Fig. 4; swimming pools, lawns, tennis courts, gardens and other amenities would be provided on the areas reserved for parade grounds and other open spaces; and some of the buildings would be used as a cinema, writing and reading rooms, etc.

Important features of the scheme are the proposed method of construction and the planning of the camp in order to allow for the most suitable arrangement of the plant. As will be seen from Fig. 1, the huts are arranged in semi-circles on three sides of the parade ground, and various halls are grouped at the other side. Each of these four groups of buildings would be constructed separately with the aid of a concrete pump. The mixing and pumping plant would first be set up behind the site of the dining-hall shown to the left of the parade ground in Fig. 1, and the whole of this group of buildings would be completed. The same plant would then be taken to the opposite side of the parade ground and this section constructed, and finally it would be moved to construct the buildings shown at the bottom of the plan. A pipeline 400 ft. long would be used.

In order to take advantage of the continuous flow of concrete from the pump, the living huts are made 225 ft. in length, and a special travelling shutter is proposed. This is shown in Figs. 2, 3 and 5. It comprises two braced-steel frames carrying the centering for the roof and the shuttering for the inner faces of the longitudinal walls. The lower frame is mounted on wheels, and carries screwjacks on which the upper frame, which carries the roof centering, is mounted. The shutter plates for the inner faces of the side walls are hinged at the top of the upper



R.C. HUTMENT CONSTRUCTION - THE "CUBITT" SYSTEM.
SUGGESTED ARMY CAMP LAYOUT FOR 1,500 MEN.

FIG. 1.—PLAN SHOWING SEQUENCE OF CONSTRUCTION OF THREE MAIN GROUPS OF BUILDINGS BY THE USE OF A CONCRETE PUMP.

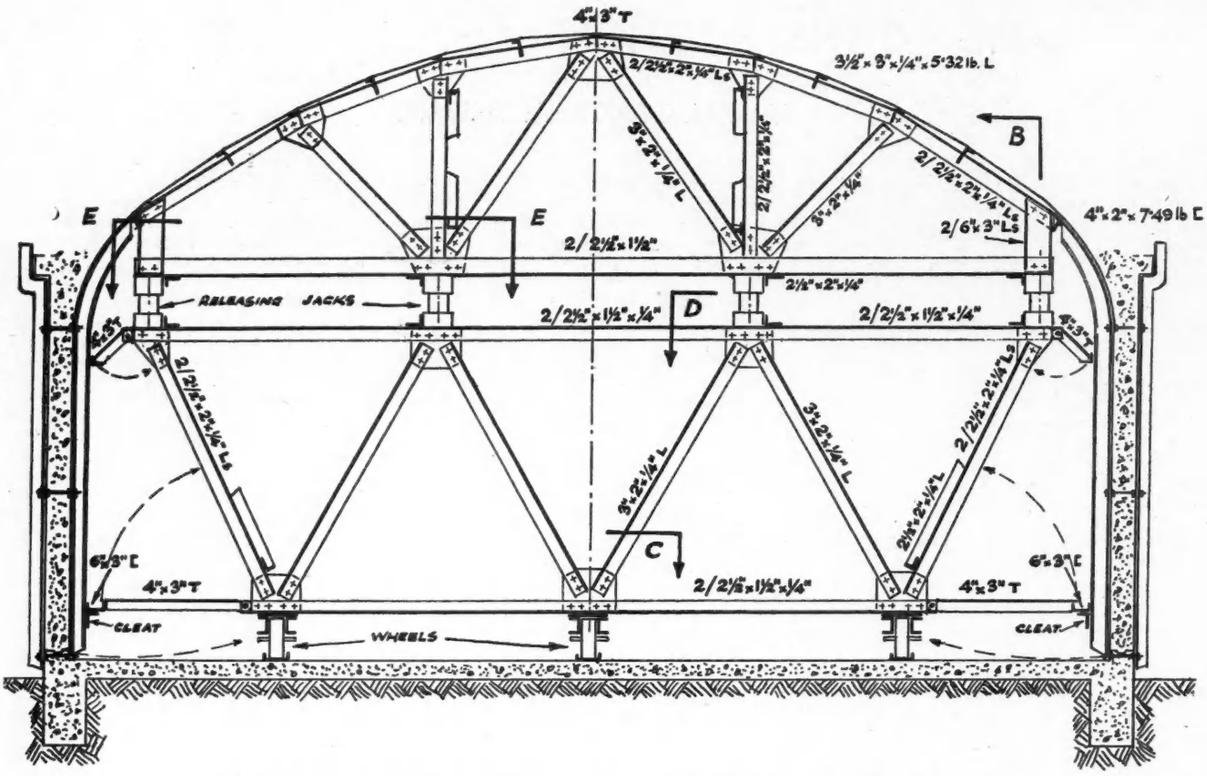


FIG. 2.—CROSS-SECTION OF TRAVELLING ROOF CENTERING AND WALL SHUTTERING.

frame and are held in position by short adjustable struts connected to the lower frame. This travelling centering is 60 ft. long by 18 ft. 6 in. wide (which is the standard width of Army huts). The shuttering for the outer faces of the walls is connected by bolts to the shuttering for the inner wall-face. The whole of the shuttering is of steel.

The shuttering is first assembled at the end of a hut site farthest from the mixing and pumping plant, and the concrete for the walls and roof of this section is poured. When this section has hardened sufficiently, the bolts holding the outer shutters in position are removed (see Fig. 2), the struts are released to allow the inner wall shutters to be eased away from the concrete, and the upper frame is lowered about 4 in. by means of the screw-jacks so that the roof centering is struck.

The shuttering is then moved along and reassembled for use on the next section, the pipeline is shortened, and another section of the hut is concreted. All the huts are concreted in this way. The concrete pump is also used for laying the floors before the erection of the huts is started.

Reinforcement is placed in position as the work proceeds, and door, window and other openings are boxed out in the usual way.

It will be seen that no timber is used in the huts except for doors and windows, and the design is such that very little steel reinforcement is required. By building each hut 225 ft. long, compared with the usual 60 ft., and using light internal partitions, more than one-third of the end walls are saved and construction is simplified and expedited.

The roofs are 5 in. thick in order to comply with the requirement for splinter-proof construction; otherwise they need be only 2½ in. thick.

It is stated that, at to-day's prices, a hut 225 ft. long can be built at a cost of £1,624, which is 8s. per foot super of floor area or 8½d. per cubic foot of total capacity. A hut

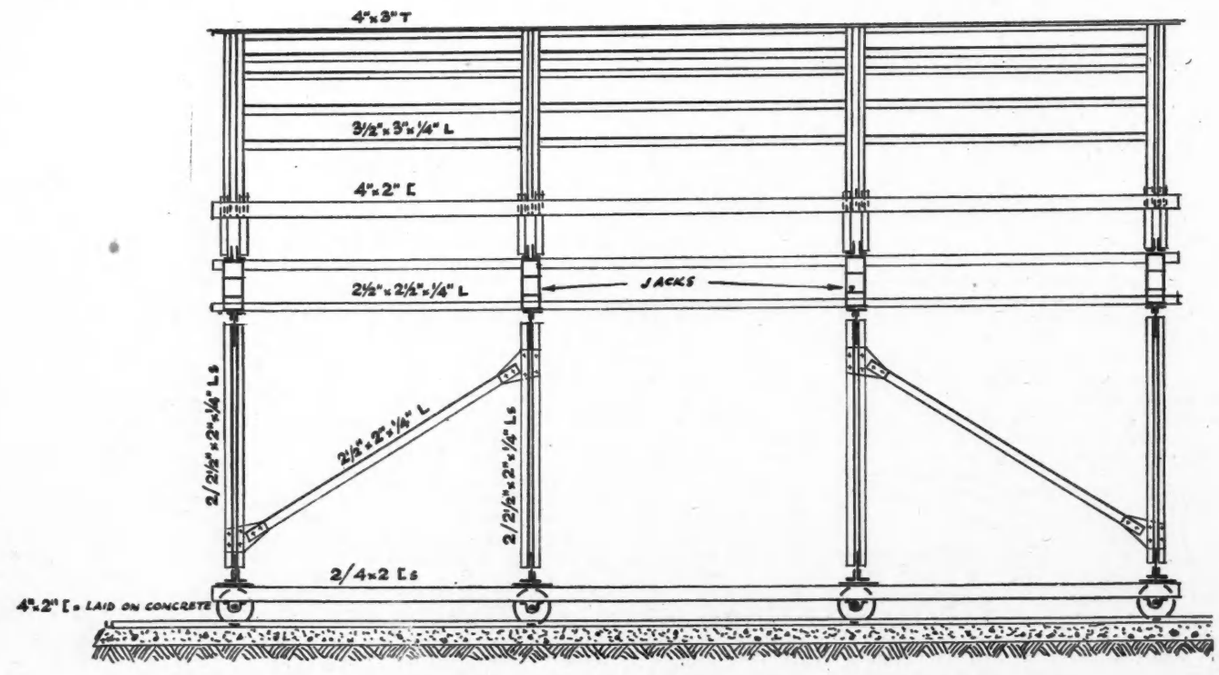


FIG. 3.—LONGITUDINAL SECTION OF TRAVELLING ROOF CENTERING AND WALL SHUTTERING.

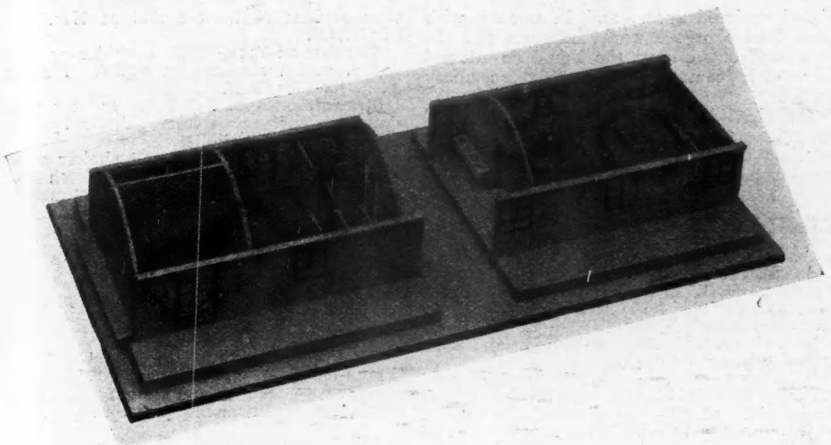


FIG. 4.—ARRANGEMENT OF HUT FOR MILITARY PURPOSES ON RIGHT. ARRANGEMENT AS HOLIDAY CAMP ON LEFT.

60 ft. long built by the same system is stated to cost £464. These prices include electric wiring, heating by slow-combustion stoves, jointless floors, plaster interior finish, and two coats of bitumen on the roof. The cost of heating and drainage can be considerably reduced by adopting amendments proposed by Mr. J. Lomax Simpson, architect and managing director of Messrs. Lever Brothers, Ltd., whose proposals embody a central heating house instead of separate units as installed in most camps.

CHEMICAL FIRE EXTINGUISHERS

HOME SECURITY BULLETIN No. C.11

THE Ministry of Home Security (Research and Experiments Branch) have issued Bulletin No. C.11, dealing with "Chemical Fire Extinguishers: Their Application to Incendiary Bombs and Resultant Fires."

The first consideration (runs the Bulletin) should always be the controlling of the fire caused by the bomb. Dealing with the bomb itself is a secondary matter. No known material of practical utility will deal with a magnesium incendiary bomb, and the resultant fire, more effectively than water, nor will an addition of any known composition to the water materially increase its effectiveness.

If, however, water is applied to burning magnesium in volume, either from a bucket or in the form of a jet from a hose or other appliance, the effect is to cause violent scattering of molten metal, but if water is applied in the form of a fine spray this scattering does not take place. It is, therefore, recommended that unless there are special reasons to the contrary, water should only be applied to the bomb in the form of a spray. If, however, a jet only is available, the range should not be less than 10-12 ft.

Liquid chemical extinguishers may be divided into three classes :—

1. The normal domestic type (two gallons capacity), in which water, in the form of a jet, is expelled by soda acid (acid alkali) or compressed carbon dioxide.

2. Foam extinguishers, normally of two gallons capacity, expelling "foam."

3. Special liquid extinguishers, usually containing carbon tetrachloride or methyl bromide. These are generally of about one quart capacity, and are operated by a small pump forming part of the extinguisher.

Extinguishers Expelling Water.

ADVANTAGES : (*a*) Can be used by one person. (*b*) Good fire extinguishers to the limit of two gallons capacity.

DISADVANTAGES : (*a*) They cannot be used in a confined space on a magnesium bomb from closer than, say, 12 ft. without the risk to the operator from flying particles of burning metal, because they expel the water in the form of a jet. If on account of heat and smoke the operator were forced to lie in a prone position, his face would be in such a position as to increase this danger.

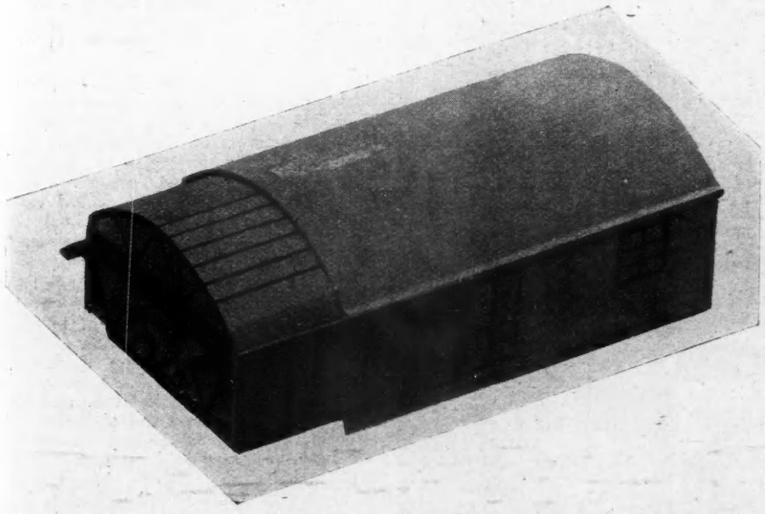


FIG. 5.—METHOD OF CONSTRUCTION WITH TRAVELLING ROOF CENTERING AND WALL SHUTTERING.

(*b*) A single two-gallon extinguisher of this type would not as a rule be capable of dealing with a bomb and the resultant fire.

(*c*) If the bomb and fire were in an attic the extinguisher might have to be carried up a ladder by a woman, and owing to the weight and bulk of the extinguisher, this would be a difficult operation. Also, if there were much heat and smoke in the attic the operator might be prevented from entering sufficiently far in to operate the chemical extinguisher.

(*d*) If there were much heat and smoke the operator would have to attack the fire and the bomb from a prone position, in which, generally speaking, a two-gallon extinguisher would be difficult to operate efficiently.

(*e*) Initial cost and cost of replacements are high as compared with the stirrup hand-pump.

FOAM EXTINGUISHERS : These extinguishers are designed to extinguish inflammable liquid fires and are not effective for dealing with incendiary bombs and resultant fires.

SPECIAL LIQUID EXTINGUISHERS : Extinguishers expelling a special liquid, usually carbon tetra-chloride, by means of a hand-pump, are excellent for dealing with small oil and spirit fires such as car fires and fires in electrical installations, where the fires are either in the open or the extinguishers are handled by experts, but they should not be used for ordinary domestic fire-fighting, as they have not good cooling properties and there is a danger from poisonous fumes. They should on no account be used on hot metal, such as burning magnesium bomb, as phosgene is evolved which might be fatal to the operator.

Extinguishers containing methyl bromide come into this category.

CONCLUSION.—Where new appliances are required, a hand pump giving the performance of the stirrup hand pump is recommended.

ADVANTAGES.—(1) It has 30 ft. of hose, thus allowing the person pumping to be well out of the heat and smoke, while the person attacking the incendiary bomb and fire has only the light nozzle to carry.

(2) An attic fire can be attacked by keeping low on a ladder and only raising the hand and part of the arm through a trap door.

(3) It has a dual-purpose nozzle which gives either a jet for extinguishing fire or spray for dealing with the incendiary bomb.

(4) Its capacity is only limited to the amount of water available.

(5) Comparatively low initial cost and practically no maintenance costs.

DISADVANTAGE.—Although it can be used by one person, this is not convenient or easy, and the pump cannot be operated from a prone position. Normally two persons are required, and three are better.

NOTE.—Where extinguishers expelling water are already installed, these may be used on fires resulting from incendiary bombs, and even on incendiary bombs themselves in cases where the violent scattering of the metal does not matter.

Other Types of Extinguishers and Extinguishing Material.

1. EXTINGUISHING MATERIAL IN POWDER FORM.—Some of these materials may have their particular uses but cannot be recommended for extinguishing magnesium bombs. They have not cooling properties to deal with a fire and they do not extinguish the molten metal of the bomb which continues to burn underneath on floor boards and would burn through if left. Also close approach to the bomb is necessary, and this might not be possible if there were much heat and smoke from a resultant fire. In addition, an appliance for extinguishing any resultant fire would be required. The use of sand is, from a practical point of view, equally effective and far cheaper.

2. SNUFFERS.—These cannot deal with the resultant fire, nor do they extinguish the molten metal of the bomb which continues to burn underneath on floor boards and would burn through, if left. Also, close approach to the bomb is necessary, and this is not always possible.

3. SPECIAL SOLUTIONS FOR EXTINGUISHING INCENDIARY BOMBS.—These are either sold for

use in a chemical extinguisher or for application by a hand pump. In no instance have they been found to be materially more effective than water, and in some cases less so.

4. GLASS HAND GRENADES CONTAINING CARBON TETRACHLORIDE AND OTHER COMPOUNDS.—The fumes from the carbon tetrachloride would be dangerous in a badly ventilated enclosed space, and in contact with great heat phosgene would be given off. In no circumstances must the liquid be allowed to come in contact with burning incendiary bombs.

These extinguishers are of little practical value in extinguishing fires of more than the smallest dimensions, and are definitely not recommended.

A.R.P. SCHEMES

LONDON.

Lambeth.—B.C. approved strengthening works at two public shelters, at £406.

Woolwich.—B.C. recommend following: Sandbag protection at first aid and decontamination centres be replaced by brickwork by Boro'. Eng., at £399; sandbag protection at Tudor Barn be replaced by brickwork by Boro'. Eng., at £350; 250 bunks from F. A. Norris and Co., Ltd., and 250 bunks from Helliwell and Co., Ltd., at £1,162 10s.; Boro'. Eng. to construct shelter at tuberculosis dispensary, at £180; shelter accommodation at public hall and annexe, Woolwich Food Office, at £255, and contracts with Thomas and Edge, at £1,495 13s., Halse and Sons, at £1,869 5s., and Campbell and McGill, at £1,137, for domestic shelters.

PROVINCIAL.

Bacup.—T.C. to erect 69 communal domestic surface shelters for 3,312 persons. Plans by H. Guffogg, B.E.

Belper.—R.D.C. approved 17 sites for domestic shelters.

Bethesda.—U.D.C. to erect two public shelters on central sites. Plans by T. P. Jones, S.

Billingham-on-Tees.—Durham C.C. to build shelter in basement of Co-op. Society's premises.

Blyth.—Northumberland C.C. to build shelters.

Carlisle.—T.C. approved: shelters, for Hudson Scott and Sons, Ltd. J. and R. Bell, Ltd., builders.

Chester.—City Surveyor to construct shelter to accommodate 50 persons at a nursery school.—Three sheds in connection with decontamination depots, at £124.—Application to be made to Board of Education for approval of shelter for children at nursery school, at £200.—Regional Technical Adviser approved 129 communal surface shelters to accommodate 6,102 persons, at £17,182.—Senior Regional Officer, M.H., approved £410 in respect of structural alterations at hospital for shelter accommodation.—Garage to be erected at depot, at £137.—City Surveyor to prepare scheme for shelter at four rest centres.

Dudley.—T.C. to erect 48-person surface shelters in lieu of trench shelters. Plans by F. H. Gibbons, B.E.

Dukinfield.—Cheshire County Child Welfare and Maternity Committee propose strengthening a basement for shelter purposes.

Formby.—U.D.C. propose communal surface shelters. Plans by E. K. Gollan, S.

Guisborough.—Sur. to U.D.C. to prepare alternative scheme for shelters on housing estate.

Hexham.—Contract for shelters at schools for Northumberland C.C. let to H. Wallace and Sons, Hencotes, Hexham.

Hinckley.—U.D.C. approved plans for shelter for A. E. Hawley and Co., Ltd.

Horbury.—U.D.C. to advertise for tenders for shelters at a hospital. Plans by W. Sugars, S.

Kidderminster. — R.D.C. propose communal domestic shelters. Plans by A. S. Northover, S.

Leigh.—Board of Governors of Infirmary propose shelters, at £1,200.

Limavady.—For four shelters for U.D.C., a contract has been placed with Lawrance E. Holmes, Catherine-st., Limavady, at £311 5s.

Longbenton.—Contract for shelters at schools let to B. Peel, Ltd., East Mill-wks., North Shields.

Market Drayton.—U.D.C. propose three public and number of domestic communal shelters. Plans by J. G. Bailey, S.

Melton and Belvoir.—R.D.C. propose communal and domestic shelters. Plans by J. Litchfield, consulting architect, 9, Nottingham-st., Melton Mowbray.

Middlesbrough.—T.C. placed further contracts with following Middlesbrough firms for shelters: W. E. Price, Stephen Coates, Ltd., E. T. Sweeting, Hudson Bros., T. Pearson.—M.H. has approved T.C.'s £4,241 plan for shelters and A.R.P. protection at an emergency hospital. Work will be allocated through Middlesbrough and District Building Trades Assn.

Middleton.—T.C. accepted tender submitted by Middleton Building Trades Federation, at £684, for shelter, at a school.—T.C. propose 70 additional communal and 297 individual shelters for 1,500 persons.—T.C. to instal electric light in all school shelters.

Morpeth.—T.C. to build shelters.

Newark.—R.D.C. to erect two communal shelters. Plans by R. Oakden, S.

Newbiggin.—U.D.C. to build 11 further shelters, at £94 each. Plans by the Council's Surveyor.

Ossett.—T.C. to erect brick surface communal shelters. Plans by J. A. A. Pratt, B.E. and S.

Raunds.—U.D.C. proposed trench shelters, at £988. Plans by G. Whittam, S.

Rotherham.—T.C to erect brick shelter at The Markets. Plans by V. Turner, B.E.

Scalby.—U.D.C. to build domestic shelters.

Skipton.—R.D.C. propose domestic communal shelters. Plans by A. Rodwell, S.

South Shields.—T.C. to provide shelters at a hospital, at £107.

Stalybridge. — E.C. propose additional A.R.P. at schools. Plans by W. A. Mitchell, B.S.

Staveley.—Houfton and Kington, architects, Market-st., Chesterfield, prepared plans for 33 communal shelters for 654 persons to Market-st. area and at Hartington for U.D.C.

Stockton-on-Tees.—T.C. considering eight A.F.S. action stations, at £2,800. Plans by A. S. Knolles, B.E.

Stratford-on-Avon.—R.D.C. to erect 49 domestic surface shelters. Plans by H. J. Weekes, S., 12, Guild-st.

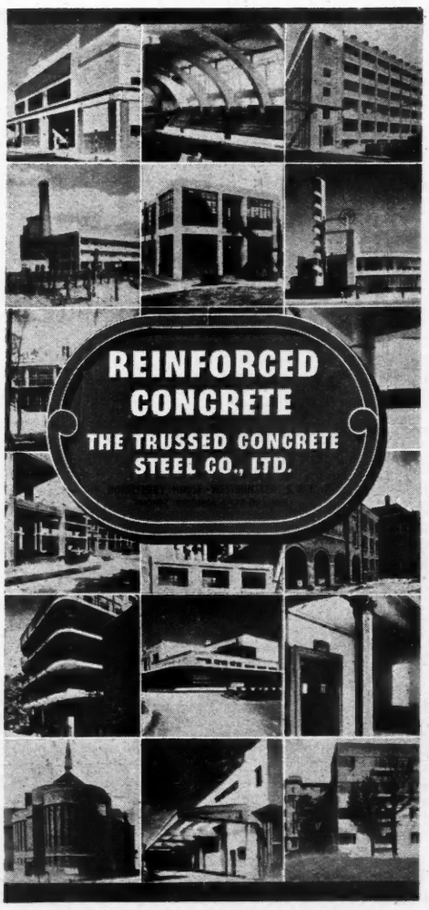
Swansea.—C.B. recommend shelter accommodation for 36 casualty cars.—Welsh Board of Health sanctioned plans and estimates of Borough Architect for temporary mortuary accommodation at five places.

Tynemouth.—T.C. to build surface shelter at a hospital. Plans by the Borough Engineer, 19, Howard-st., North Shields.—E.C. to build two shelters for use of school children.

SCOTLAND.

Crieff.—Corporation to erect shelters. Plans by D. B. Booth, Burgh Architect.

Denny.—Corporation to erect shelters. F. Cook, Burgh Architect, prepared plans.



4-488A.

SAWMILL MACHINERY, PLANT AND HAULAGE EQUIPMENT

IN order to secure an increase in the production of Home Grown Timber and in view of the increasingly difficult supply position, the Forestry Commission has placed bulk orders for sawmill plant and machinery and transport equipment. These orders are for limited supplies, but further orders will be placed if the demand justifies them. The machinery, etc., thus purchased will, in approved cases, be available to timber merchants or timber hauliers either for outright purchase, hire purchase under the Commission's scheme (of which details have already been published), or for hire on the following general conditions:—

1. The scheme will be limited to items the unit cost of which is not less than £50. Consumable items such as saws and belting will not be included. 2. Orders have been placed for power units, rack sawbenches, caterpillar and road tractors, articulated pole wagons, light pole wagons, and lorries—deliveries are in most cases due to commence in 3 to 4 months' time, but a limited supply may be available at an earlier date. 3. The hirer may determine at any time on one month's notice. 4. The owners may, after six months, determine the hire by one month's notice, but in such case the hirer only pays rent to date of determination.

5. The hirer will be required to insure against fire and loss, damage or risk from whatever cause arising. 6. Rent will be payable half-yearly in arrear—interest at 10 per cent. per annum will be charged on overdue payments. 7. The owner shall be entitled to retake possession in the event of default in payment of rent or in proper maintenance of machinery, plant, vehicles, etc. 8. The hirer shall use the machinery, etc., in a proper and skilful manner, and at his own expense keep the same in good repair, fair wear and tear excepted. In the case of transport vehicles he must, at his own expense, effect tyre renewals.

9. Rents will be calculated as follows:—Power units (Diesel or steam), 20 per cent. of capital value (at date of commencement of hire) per annum. Sawbenches—rack or push, 20 per cent. of capital value (at date of commencement of hire) per annum. Haulage equipment, 25 per cent. of capital value (at date of commencement of hire) per annum, the assessment of capital value to be made by the owner.

10. The costs of delivery and installation of machinery and plant, etc., will be payable by the hirer together with that of placing the same on rail on the termination of the hire. 11. Applications should be made to the Forestry Commission (T.S.D.) Branch 3, at 2/7, Elmdale Road, Bristol 8, stating precisely what is required and giving acceptable alternatives. It must be appreciated that it has been necessary to limit orders to a few types and that no guarantee of availability can in present circumstances be given. 12. The above are general particulars only—the precise terms will be as incorporated in the form of agreement which has been prepared.

CONTRACTS OPEN

For some contracts still open, but not included in this list, see previous issues. Those with an asterisk are advertised in this number. The dates at the head of paragraphs are those for the submission of tenders: a dagger (†) denotes closing date for applications; the name and address at the end refer to the person from whom particulars may be obtained.

BUILDING.

DECEMBER 27.

Andover T.C. — 36-personnel cleansing station. Boro'. Sur.

DECEMBER 28.

Ealing T.C.—600 communal shelters. C. W. Seddon, Boro'. Eng. Dep. £2.

Magor and Saint Mellons R.D.C.—4 communal shelters. W. S. Prosser, Sur. Dep. £1 1s.

Newcastle-upon-Tyne T.C.—Alterations and additions, consisting of new bathroom, w.c., etc., to lodge at St. Andrew's cemetery. City Eng.

Ossett T.C. — Surface-type communal shelters. Boro'. Eng. and Sur.

DECEMBER 31.

Abertillery U.D.C.—4 public surface shelters. A. Gordon Jones, Eng. and Sur. Dep. £1 1s.

Liskeard T.C.—Communal shelters. H. R. Venning, L.R.I.B.A., Midland Bank-chams.

North Eastern Housing Assn., Ltd.—56 houses at Maryport. L. J. Couves and Partners, Westfield-av., Gosforth, Newcastle-upon-Tyne, 3. Dep. £3 3s.

JANUARY 2.

Armagh U.D.C.—Seven public shelters. V. M. Conran, Town Clerk.

Athlone U.D.C.—10 workmen's dwellings and other works. O. Doyle, Town Sur. Dep. £2.

JANUARY 4.

Rochdale T.C.—Extensions to cooking centre. Boro'. Sur.

JANUARY 11.

Gravesend T.C.—Demolition and rebuilding portion of a school. Borough Architect, 5, Woodmille-ter.

JANUARY 14.

Gravesend T.C.—Ground floor portion of new police headquarters and fire station. Borough Architect, 5, Woodville-ter. Dep. £3 3s.

JANUARY 16.

Dublin Corporation.—332 houses with estate office annexe on Cabea West housing estate. H. G. Simms, Housing Architect, 5, Wellington Quay. Dep. £5 5s.

JANUARY 25.

***Millom R.D.C.**—Filtering station, etc., for waterworks scheme. Taylor and Wallin, engineers, 1, Saville-pl., Newcastle-upon-Tyne, 1.

NO DATE.

Alfreton U.D.C.—Brick store shed. Sanitary Inspector, Cornhill House.

Cornwall C.C.—Raid shelters in various parts of county. County Architect, Truro.

Eastern Northamptonshire Joint Hospital Board.—Additions and alterations at isolation hospital. Sur., Council Offices Wellingborough.

Leicester T.C.—Concreting and waterproofing of Anderson steel shelters. A. T. Gooseman, City Sur.

PAINTING, ELECTRIC LIGHTING, HEATING, &c.

DECEMBER 28.

Accrington T.C.—Internal installation of electric light in public school and domestic communal shelters; also external painting houses. H. Sanderson, Boro'. Eng. (2 contracts.)

Bridgnorth T.C.—Repairing the stone and brick arch at north end of Town Hall. I. M. Nicholson, Boro'. Eng., College House.

Chislehurst and Sidcup U.D.C.—External painting, waterproofing, fixing of metal windows and other works at houses at Foots Cray and Ruxley. E. Lawes, Council Offices.

Sedgley U.D.C.—Painting of ironwork at Beacon Hill and Upper Gornal sewage disposal works, etc. A. E. Dicks, Sur. Dep. 10s.

DECEMBER 30.

Sunderland C.B.—Ironmongery, terrazzo and fireplaces for sub fire station. Boro' Eng.

Whitby U.D.C.—Exterior painting of Stone House, St. Hilda's-ter. Eng. and Sur.

DECEMBER 31.

Beds C.C.—Installation of heating, ventilation and hot-water supply, etc., in connection with new technical college in Luton. County Architectural Dept., Shire Hall, Bedford. Dep. £1 1s.

JANUARY 7.

Colwyn Bay T.C.—Painting of understructure of Victoria pier (paint supplied). N. S. Jeffrey, A.M.I.C.E., Boro'. Eng. and Sur.

NO DATE.

West Riding E.C.—Asphalting at Norton school. F. Hall, Chapel-st., Knottingley.

MATERIALS.

DECEMBER 28.

Blackpool C.B.—108 tons of welded mild steel mesh reinforcement. Boro' Eng.

ENGINEERING, IRON AND STEEL.

DECEMBER 30.

Bethesda U.D.C.—New intake, supplying and laying about 2,138 yds. of 5-in. and 6-in. asbestos-cement pipes on mountain, and other incidental work. Henry Adams and Son, consulting engineers, 60, Queen Victoria-st., London, E.C.4. Dep. £1.

Kilkenny County Board of Health and Public Assistance.—Water supply for Johnstown and Urlingford, including intake works, laying of 7,006 yds. of mains, construction of reinforced concrete water tower and pumping station. T. Kelly, Engineer's Office, Central Hospital, Kilkenny. Dep. £5 5s.

DECEMBER 31.

Llanrwst and Trefriw Joint Water Committee.—Laying a 6-in. concrete-lined spun iron water main about 200 yds. long, part of which forms the intake pipe to lake; also construction of valve chamber and other incidental work. S. L. Richards, Consulting Eng., Greenways, Portmadoc.

JANUARY 6.

Enniskillen R.D.C.—2 small filters in connection with proposed new water supply for Lisbellaw. F. G. Townsend, E.

JANUARY 11.

Newthorpe. — Washing, screening and replacement of filter media in two existing beds, with supply of new media; sundry other repairs to works; repairs to two cottages; painting to two cottages. Elliott and Brown, chartered civil engineers, Stanley House, Pelham-rd., Nottingham. Dep. £3 3s.

FEDERATED EMPLOYERS'

Insurance Association Ltd.

(non-tariff)

Head Office:

8, King St., Manchester

London Office:

23, Lawrence Lane, Cheapside, London, E.C.2

All Classes of Insurance Transacted

(Except Life and Marine)

The Leading Office for

Contract Guarantee Bonds

JANUARY 15.

Dublin T.C.—Reinforced concrete reservoir. City Eng., 28, Castle-st. Dep. £10 10s.

NO DATE.

Cheltenham R.D.C.—Materials and construction of extensions to sewage-disposal works. J. H. Haiste, civil engineer, Middleton-chams., Lowgate, Hull.

ROAD, SEWERAGE AND WATER WORKS.

DECEMBER 30.

Lewes T.C.—Sewerage, comprising construction of approx. 920 lin. yds. of 12-in. dia. cast-iron rising main, including river and railway crossings and appurtenant works. C. T. Butler, Boro'. Sur. Dep. £2 2s.

JANUARY 3.

Repton Joint Hospital Board.—Provision and laying at Isolation Hospital, Etwall, about 120 yds. lin. 3-in. spun iron water main and valves and construction of reservoir. Eng., The Poplars, Rolleston-rd., Burton-on-Trent.

JANUARY 4.

Border R.D.C.—5,434 lin. yds. of pipes for waterworks. E. E. Harding, Clerk, 7, Victoria-pl., Carlisle.

Luton T.C.—Main outfall sewer, final section. F. Oliver, Boro'. Eng. and Sur. Dep. £2 2s.

JANUARY 8.

Wetherby P.C.—Providing and laying about 180 yds. of 9-in. dia. concrete porous pipes and 100 yds. 6-in. dia., together with manholes and erection of 97 yds. concrete post and wire fence, at cemetery. F. J. Rodwell and Son, engineers, 20, Park Row, Leeds, 1. Dep. £1 1s.

Public Appointments.

DECEMBER 27.

Essex C.C.—Building Assistant in Land Agent's Dept. L. G. Lewis, Deputy C., Chelmsford.

JANUARY 11.

***Fulham B.C.**—Depot Superintendent and Assistant Works Superintendent. W. Townsend, T.C.

TRADE NEWS

Change of Address.

Messrs. Henry Butcher and Co., who were obliged to vacate their offices, have now taken new offices at 73, Chancery-lane, W.C.2 (over Barclays Bank). The temporary offices at 16a, The Promenade, Hale-lane, Edgware, Middlesex, are being retained. The telephone numbers are as follows: Holborn 8411 (5 lines), and Edgware 8121 (2 lines).

Blast Tests on Glass.

An interesting technical film entitled "Blast Tests on Glass" was shown by Herts Pharmaceuticals, Ltd., at the Gaumont-British Theatre, Wardour-street, W., on Wednesday last. The film demonstrated in slow motion what actually happens when glass treated with various anti-shatter materials is subjected to blast. It was shown conclusively that adhesive tapes covering not less than 50 per cent. of the glass area, and applied between coatings of varnish, provide excellent protection. It was stressed that the tapes should extend over the framework of windows in order to provide maximum security.

PURCHASE TAX.

The following decisions regarding the liability to tax of certain articles are published as supplementary to those already given in Notice No. 78.

Class 2 (Textiles, etc.), Engineers' Cleaning Rags: Waste materials and old worn or used rags not processed or made up and not in a condition suitable for sale as goods of a taxable class (*e.g.*, as upholstery stuffing materials or domestic cleaning or polishing cloths, or rubbers) are not liable to Purchase Tax.

Made-up wipers, cut and hemmed, made-up cleaning or polishing cloths, whether of new or prepared or reconditioned material, are liable under Class 2.

Class 9 (Hardware, Turnery, etc.), chargeable at the rate of 33⅓ per cent.: Metallic gas tubing, whether in coils, or long or short lengths, and push-ons therefor.

RATES OF WAGES IN THE BUILDING TRADE

AS AND FROM 1st DECEMBER, 1940

[Every endeavour is made to ensure accuracy, but we cannot be responsible for errors]

	Crafts-men.	Lab-ourers.
Aberavon	1/9½	1/4¾
Aberdare	1/9½	1/4¾
Abergavenny	1/9½	1/4¾
Abingdon	1/8	1/3½
Accrington	1/9½	1/4¾
Aldeburgh	1/6	1/2
Aldershot	1/8	1/3½
Alfreton	1/9½	1/4¾
Alnwick	1/9	1/4½
Altrincham	1/9½	1/4¾
Amble	1/9	1/4½
Amersham	1/8	1/3½
Ammanford	1/9½	1/4¾
Andover	1/7½	1/3¼
Ardingley	1/7½	1/3¼
Arundel	1/7½	1/3¼
Ascot	1/7½	1/3¼
Ashby-de-la-Zouch	1/9½	1/4¾
Ashford (Kent)	1/7½	1/3¼
Ashford (Middlesex)	1/9½	1/4¾
Ashington	1/9	1/4½
Ashtead	1/9½	1/4¾
Ashton-under-Lyme	1/9½	1/4¾
Aylesbury	1/7½	1/3¼
Aylsham	1/6½	1/2½
Bagshot	1/7½	1/3¼
Banbury	1/7½	1/3¼
Barnsley	1/9½	1/4¾
Barnstaple	1/7½	1/3¼
Barrow-in-Furness	1/9½	1/4¾
Barry	1/9½	1/4¾
Basingstoke	1/7½	1/3¼
Bath	1/9	1/4½
Batley	1/9½	1/4¾
Beaconsfield	1/8	1/3½
Beccles	1/6	1/2
Bedford	1/9	1/4¼
Berkhamsted	1/7½	1/3¼
Berwick	1/9	1/4½
Beverley	1/9½	1/4¾
Bexhill-on-Sea	1/8	1/3½
Bideford	1/7½	1/3¼
Biggleswade	1/7½	1/3¼
Billericay	1/7	1/2½
Birchington	1/7½	1/3¼
Birkenhead	‡§1/11	¶
Birmingham	†1/9½	†1/4¾
Bishop Auckland	1/9½	1/4¾
Bishops Stortford	1/8½	1/4
Blackburn	1/9½	1/4¾
Blackpool	1/9½	1/4¾
Blyth	1/9½	1/4¾
Bognor Regis	1/7½	1/3¼
Bolton	1/9½	1/4¾
Bournemouth	1/8½	1/4
Bracknell	1/7½	1/3¼
Bradford	1/9½	1/4¾
Bradford-on-Avon	1/6½	1/2½
Braintree	1/7½	1/3¼
Brentwood	1/9	1/4½
Bridgwater	1/8	1/3½
Bridlington	1/9	1/4½
Brighouse	1/9½	1/4¾
Brighton	1/8½	1/4
Bristol	1/9½	1/4¾
Broadstairs	1/7½	1/3¼
Bromsgrove	1/9	1/4½
Buckley	1/9½	1/4½
Bungay	1/5½	1/1½
Burnham-on-Crouch	1/6	1/2
Burnley	1/9½	1/4¾
Burslem	1/9½	1/4¾
Burton-on-Trent	1/9½	1/4¾
Bury	1/9½	1/4¾
Bury St. Edmunds	1/7	1/2½
Buxton	1/9	1/4½
Byfleet	1/8	1/3½
Cambridge	1/9½	1/4¾
Canterbury	1/7½	1/3¼
Cardiff	1/9½	1/4¾
Carlisle	1/9½	1/4¾
Carnforth	1/9½	1/4¾
Castleford	1/9½	1/4¾
Caterham	1/9½	1/4¾
Chard	1/6½	1/2½
Chatham	1/8½	1/4
Chelmsford	1/9	1/4¼
Cheltenham	1/8½	1/4
Chepstow	1/9	1/4½
Chertsey	1/8½	1/4
Chester	1/9½	1/4¾
Chesterfield	1/9½	1/4¾
Chichester	1/7½	1/3¼
Chorley	1/9½	1/4¾
Cirencester	1/7	1/2¾
Clacton	1/7½	1/3¼
Cleveleys	1/9½	1/4¾
Clitheroe	1/9½	1/4¾
Cobham (Surrey)	1/8½	1/4
Colchester	1/9	1/4½
Colwyn Bay	1/8½	1/4
Congleton	1/9	1/4½
Coventry	1/9½	1/4¾
Cranbrook	1/7½	1/3¼
Cranleigh	1/7½	1/3¼
Crawley	1/7½	1/3¼
Crewe	1/9	1/4½
Cromer	1/6½	1/2½
Crowborough	1/7½	1/3¼
Cuckfield	1/7½	1/3¼
Darlington	1/9½	1/4¾
Darwen	1/9½	1/4¾
Daventry	1/8	1/3½
Deal	1/7½	1/3¼
Denbigh	1/8½	1/4
Derby	1/9½	1/4¾
Devizes	1/6½	1/2½
Dewsbury	1/9½	1/4¾
Didcot	1/7½	1/3¼
Diss	1/6	1/2
Doncaster	1/9½	1/4¾
Dorchester	1/7	1/2¾
Dorking	1/8	1/3½
Dover	1/7½	1/3¼
Dovercourt	1/7½	1/3¼
Driffield	1/8	1/3½
Droitwich	1/9	1/4¼
Dudley	1/9½	1/4¾
Dunstable	1/8	1/3½
Durham City	1/9½	1/4¾
Eastbourne	1/8½	1/4
E. Glam. (Mon.Val.)	1/9½	1/4¾
East Grinstead	1/7½	1/3¼
Edenbridge	1/7½	1/3¼
Ely	1/6½	1/2½
Epping	1/9½	1/4¾
Exeter	1/9	1/4½
Exmouth	1/8	1/3½
Fakenham	1/6½	1/2½
Falmouth	1/8	1/3½
Fareham	1/8½	1/4
Faversham	1/7½	1/3¼
Felixstowe	1/8½	1/4
Filey	1/8	1/3½
Fleetwood	1/9½	1/4¾
Flint	1/9½	1/4¾
Folkestone	1/7½	1/3¼
Frinton-on-Sea	1/7½	1/3¼
Frome	1/6½	1/2½
Gainsborough	1/8½	1/4
Gateshead	1/9½	1/4¾
Gillingham (Kent)	1/8½	1/4
Glossop	1/9½	1/4¾
Gloucester	1/9	1/4½
Godalming	1/7½	1/3½
Goole	1/9½	1/4¾
Gosport	1/9	1/4½
Grantham	1/8½	1/4
Gravesend	1/9	1/4½
Great Yarmouth	1/7½	1/3¼
Grimsby	1/9½	1/4¾
Guildford	1/7½	1/3¼
Guisborough	1/8	1/3½
Halifax	1/9½	1/4¾
Hanley	1/9½	1/4¾
Harpenden	1/8½	1/4
Harrogate	1/9½	1/4¾
Hartlepools	1/9½	1/4¾
Harwich	1/7½	1/3¼
Haslemere	1/7½	1/3¼
Hastings	1/7½	1/3½
Hatfield	1/9	1/4½
Haywards Heath	1/7½	1/3¼
Hednesford	1/9	1/4½
Hemel Hempstead	1/8½	1/4
Henley-on-Thames	1/7½	1/3½
Hereford	1/7½	1/3¼
Herne Bay	1/7½	1/3¼
Hertford	1/9	1/4½
Heysham	1/9½	1/4¾
Hitchin	1/8½	1/4
Hoddesdon	1/9	1/4½
Holt (Norfolk)	1/6	1/2
Horley	1/7½	1/3¼
Horsham	1/7½	1/3¼
Horwich	1/9½	1/4¾
Huddersfield	1/9½	1/4¾
Hull	1/9½	1/4¾
Hunstanton	1/6½	1/2½
Huntingdon	1/7	1/2¾
Ilfracombe	1/7½	1/3¼
Ingatestone	1/8	1/3½
Ipswich	1/9	1/4½
Isle of Thanet	1/7½	1/3¼
Isle of Wight	1/7	1/2¾
Keighley	1/9½	1/4¾
Kenilworth	1/9½	1/4¾
Kettering	1/9½	1/4¾
Kidderminster	1/9	1/4½
King's Lynn	1/7½	1/3¼
Kirkham	1/9½	1/4¾
Knowle	1/9	1/4½
Lancaster	1/9½	1/4¾
Leamington	1/9½	1/4¾
Leatherhead	1/8½	1/4
Leeds	1/9½	1/4¾
Leicester	1/9½	1/4¾
Leighton Buzzard	1/6½	1/2½
Letchworth	1/8½	1/4
Lewes	1/7½	1/3¼
Lichfield	1/8½	1/4
Lincoln	1/9½	1/4¾
Littlehampton	1/7½	1/3¼
Liverpool	†§1/11	¶
Llandudno	1/8½	1/4
Llanelly	1/9½	1/4¾
London—		
12m. radius	*1/11	1/5¾
12-15 m. radius	*1/10½	1/5½
Long Eaton	1/9½	1/4¾
Longton	1/9½	1/4¾
Loughborough	1/9½	1/4¾
Louth	1/8	1/3½
Lowestoft	1/7½	1/3½
Luton	1/9	1/4½
Macclesfield	1/9	1/4½
Maidenhead	1/8½	1/4
Maidstone	1/8	1/3½
Malvern	1/8	1/3½
Manchester	1/9½	1/4¾
Manningtree	1/6½	1/2½
Mansfield	1/9½	1/4¾
March	1/6½	1/2½
Margate	1/7½	1/3¼
Market Harborough	1/8½	1/4
Matlock	1/8	1/3½
Melton Constable	1/6	1/2
Melton Mowbray	1/8½	1/4
Merthyr	1/9½	1/4¾
Middlesbrough	1/9½	1/4¾
Middleton	1/9½	1/4¾
Middlewich	1/9	1/4½
Milford Haven	1/8	1/3½
Morecambe	1/9½	1/4¾
Morley	1/9½	1/4¾
Mundesley	1/6½	1/2½
Nantwich	1/9	1/4½
Nelson	1/9½	1/4¾
Newark-on-Trent	1/9	1/4½
Newbury	1/7½	1/3¼
Newcastle-on-Tyne	1/9½	1/4¾
Newcastle-u.-Lyme	1/9½	1/4¾
New Forest	1/7½	1/3¼
Newmarket	1/7½	1/3¼
Newport, Mon.	1/9½	1/4¾
Newport Pagnell	1/7½	1/3¼
Northampton	1/9½	1/4¾
Norwich	1/9½	1/4¾
Nottingham	1/9½	1/4¾
Nuneaton	1/9½	1/4¾
Oakham	1/8	1/3½
Oldham	1/9½	1/4¾
Ormskirk	1/9½	1/4¾
Oxford	1/9	1/4½
Oxted	1/8	1/3½
Paignton	1/9	1/4½
Peterborough	1/9	1/4½
Plymouth	1/9½	1/4¾
Pontefract	1/9½	1/4¾
Pontypridd	1/9½	1/4¾
Port Talbot	1/9½	1/4¾
Portsmouth	1/9	1/4½
Preston	1/9½	1/4¾
Pulborough	1/7½	1/3¼
Ramsgate	1/7½	1/3¼
Reading	1/9	1/4½
Redditch	1/9	1/4½
Redhill	1/8	1/3½
Ripon	1/8	1/3½
Rochdale	1/9½	1/4¾
Rochester	1/8½	1/4
Rugby	1/9½	1/4¾
St. Albans	1/9	1/4½
St. Helens	1/9½	1/4¾
St. Neots	1/7	1/2¾
Saffron Walden	1/6½	1/2½
Salisbury City	1/7	1/2¾
Salisbury Plain	1/8½	1/4
Sawbridgeworth	1/8	1/3½
Saxmundham	1/6	1/2
Scarborough	1/9	1/4½
Scunthorpe	1/9½	1/4¾
Selby	1/9½	1/4¾
Sevenoaks	1/8	1/3½
Sheerness	1/7½	1/3¼
Sheffield	1/9½	1/4¾
Shipley	1/9½	1/4¾
Shoeburyness	1/9	1/4½
Shoreham	1/8½	1/4
Shrewsbury	1/9	1/4½
Sittingbourne	1/7½	1/3¼
Skegness	1/8½	1/4
Sleaford	1/8	1/3½
Slough	1/8½	1/4
Southampton	1/9	1/4½
Southend-on-Sea	1/9	1/4½
Southport	1/9½	1/4¾
South Shields	1/9½	1/4¾
Spalding	1/7½	1/3¼
Stafford	1/9	1/4½
Staines	1/8½	1/4
Stamford	1/8½	1/4
Stevenage	1/8½	1/4
Stockport	1/9½	1/4¾
Stockton-on-Tees	1/9½	1/4¾
Stoke-on-Trent	1/9½	1/4¾
Stourbridge	1/9½	1/4¾
Stourport	1/9	1/4½
Stowmarket	1/6½	1/2½
Stratford-on-Avon	1/8½	1/4
Stroud	1/8½	1/4
Sunderland	1/9½	1/4¾
Sutton Coldfield	1/9½	1/4¾
Swaffham	1/6	1/2
Swanage	1/7½	1/3¼
Swansea	1/9½	1/4¾
Swindon	1/8	1/3½
Tamworth	1/9	1/4½
Taunton	1/8	1/3½
Tenterden	1/7½	1/3¼
Thames Haven	1/9½	1/4¾
Thetford	1/7	1/2¾
Thorpe Bay	1/9	1/4½
Todmorden	1/9½	1/4¾
Tonbridge	1/8	1/3½
Torquay	1/9	1/4½
Totnes	1/7½	1/3¼
Trowbridge	1/6½	1/2½
Truro	1/7	1/2¾
Tunbridge Wells	1/8	1/3½
Uppingham	1/8	1/3½
Uttoxeter	1/8	1/3½
Wakefield	1/9½	1/4¾
Walsall	1/9½	1/4¾
Walsden	1/9½	1/4¾
Walton-on-Naze	1/7½	1/3¼
Ware	1/9	1/4½
Warminster	1/6½	1/2½
Warrington	1/9½	1/4¾
Warwick	1/9½	1/4¾
Wellingborough	1/9	1/4½
Welwyn	1/8½	1/4
Welwyn Gar. City	1/9½	1/4¾
Wells (Norfolk)	1/6	1/2
West Bromwich	1/9½	1/4¾
Westcliff-on-Sea	1/9	1/4½
Weston-super-Mare	1/8½	1/4
Weybridge	1/8½	1/4
Weymouth	1/7½	1/3¼
Whitby	1/8½	1/4
Whitstable	1/7½	1/3¼
Widnes	1/9½	1/4¾
Wigan	1/9½	1/4¾
Wigton	1/8	1/3½
Willington	1/9½	1/4¾
Wilmslow	1/9½	1/4¾
Winchester	1/8	1/3½
Windermere	1/8	1/3½
Windsor	1/8½	1/4
Wisbech	1/7	1/2¾
Witham	1/7½	1/3¼
Woking	1/8	1/3½
Wokingham	1/7½	1/3¼
Wolverhampton	1/9½	1/4¾
Woodbridge	1/7	1/2¾
Worcester	1/9	1/4½
Workington	1/8	1/3½
Worksop	1/9	1/4¾
Worthing	1/7½	1/3¼
Wrexham	1/9	1/4½
Wroxham	1/7	1/2¾
Wycombe	1/8½	1/4
Wymondham	1/6½	1/2½
Yeovil	1/8	1/3½
York	1/9½	1/4¾

* Painters 1d. less than other Craftsmen. † Plus 2d. per working day. ‡ Plasterers 1/11½

¶ Tradesman's Labourers, 1/5½. Navvies and General Labourers 1/4¾.

§ Joiners, Plumbers, Bricklayers, Tilers and Masons receive 2/– per week or 4d. per day Tool Money.

For Building Trade Wages in Scotland, see page 632.

PRICES CURRENT OF MATERIALS*

Note: Owing to the exceptional circumstances which prevail at the present time prices of materials should be confirmed by inquiry. The prices for soft woods are for cash on delivery, and are subject to adjustment when the increased price of £22 per standard for national released stocks is finally fixed.

At present linseed oil and genuine spirits of turpentine can only be supplied in cans in small quantities.

BRICKS, &c.

Delivered to site, City and Central Area, Full Lorry Loads. £ s. d.
Best Stocks 4 18 0
Second Hard Stocks 4 11 0

Per 1,000. Delivered at London Goods Stations.

2½ in. Phorpres. A discount of 6d. 1,000 only monthly account.	King's Cross Station per 1,000. s. d.	To sites in W.C. District. per 1,000 s. d.
Pressed	52 3	58 3
Keyed	54 3	60 3
Single Bullnose	72 3	78 3
Rustics	72 3	78 3
Whites	72 3	78 3

White Midhurst Facing Bricks (delivered London site) ..... £ s. d. 3 12 6
Best blue Pressed Staffs. (London Stns.). ... 8 18 0
Do. Bullnose (London Stns.) 9 8 0
Blue Wire Cuts (London Stns.) 7 15 0
Best Stourbridge Fire Brick (London Stns.):—
2½ in. ..... 8 0 0 3 in. 9 15 0

GLAZED BRICKS. (London Stns.)

Best White Ivory and Salt Glazed Stretcher	26 0 0	D'ble Str'tch'rs .. D'ble Headers .. One side & two ends	34 10 0 31 10 0 35 10 0
Headers	25 10 0	Two sides & one end	36 10 0
Quoins, Bullnose and 4½ in. Flats	32 10 0	Splays and Squints	34 0 0

Second Quality, £2 per 1,000 less than best. Cream and buff, £2 extra over white. Other colours. Hard Glaze, £5 10s. extra over white.

PARTITION SLABS.

Delivered London Area.

"PHORPRES" HOLLOW PARTITION BLOCKS.

2" per yd. sup. ..	2 3	3" per yd. sup. ..	2 9
2½" " " ..	2 6	4" " " ..	3 1

CLINKER CONCRETE.

2" per yd. sup. ..	1 6	3" per yd. sup. ..	2 0
2½" " " ..	1 8	4" " " ..	2 4

CRANHAM TERRA COTTA.

2" per yd. sup. ..	3 0	3" per yd. sup. ..	3 8
2½" " " ..	3 6	4" " " ..	4 7

HEMPSTEAD—KEYED TWO SIDES.

12" x 9" x 2"	2 6	12" x 9" x 3"	3 0
12" x 9" x 2½"	2 9	12" x 9" x 4"	3 9

Per yard super d/d. Free on site, London.

SAND.

Thames Ballast....	7	9 per yd.	delivered 2 miles radius Paddington.
Pit Ballast	7	3 " "	
Pit Sand.....	9	9 " "	
Washed Sand	10	9 " "	
¾ in. Shingle	8	0 " "	
¾in. Broken Brick	12	0 " "	
Pan Breeze	8	3 " "	

CEMENT.

Best British Portland Cement. Standard Specification delivered London Area. £ s. d.
4 ton loads and upwards site..... Per ton 2 4 6
1 ton to 4 tons site 2 7 6
Alongside Vauxhall in 80 ton lots 2 2 0
"Ferrocrete" Rapid Hardening Cement—
4 ton loads and upwards site 2 10 6
1 ton to 4 tons site 2 13 6
Alongside Vauxhall in 80 ton lots 2 8 0
Stored in Reserved Bins at works. 1/6 per ton extra.
"Aquacrete" Water Repellent, "Blue Circle" cement, 30/- per ton extra or ordinary "Blue Circle" prices.
"Colorcrete" Nos. 1 and 2. Coloured Rapid Hardening Portland Cement 3 14 6
"Colorcrete" not rapid hardening, according to colour, from £7 to £15 10s. per ton.
"Snowcrete" White Portland Cement..... 9 5 0
Super Cement (Waterproof)..... 3 14 6
NOTE.—Paper bags will be charged at the rate of 5/- nett per ton. Jute sacks charged 1s. 9d. nett each and 1/6 nett each allowed if returned to works within two weeks, in good condition.
Carriage will be paid by makers on returned empty jute sacks.
Roman Cement £7 5 Keene's Cement, White £6 10 0
Parian Cement 6 10 " " Pink 6 5 0
Cementone Colours for cement according to tints per cwt. from £2 16s. 0d.

PLASTER.

	£ s. d.		£ s. d.
Coarse, Pink	3 12 6	Sirapite, Coarse	4 3 0
" White ..	4 0 0	" Finish ..	4 11 0
Pioneer	4 3 0		

Above prices for 4-ton loads and over London Area.

Best Ground Blue Lias Lime	2 17 6	Grey Stone Lime	2 12 6
		Chalk Lime	2 12 6
Granite Chippings	1 10 0	Hair per cwt. ..	2 7 6

NOTE.—Sacks are charged 1s. 9d. each, and credited 1s. 6d., if returned in good condition within three months, carriage paid.
Stourbridge Fireclay in sacks 37s. per ton at rly. dep.

STONE.

BATH STONE.—Delivered in railway trucks at Westbourne Park, Paddington, G.W.R., or South Lambeth, G.W.R., per ft. cube ..... s. d. 2 11½
BEER STONE—RANDOM BLOCK—
Free on rail at Seaton Station. per ft. cube 2 3
Delivered free on rail Nine Elms, S.R. " 3 1½
Selected approximate size one way, 1d. per cubic ft. extra, selected approximately three sizes or for special work, 3d. per cubic ft. extra.

PORTLAND STONE—

	s. d.
Brown Whitbed, in random blocks of 20 ft. average, delivered in railway trucks at Nine Elms, S. Rly., South Lambeth Station, G.W.R., and Westbourne Park, Paddington, G.W.R., per ft. cube	4 6
Do. do. delivered on road waggons as above stations, per ft. cube	4 6
White basebed 3d. per ft. cube extra.	
NOTE.—1d. per ft. cube extra for every ft. over 20 ft. *average* and ¼d. beyond 30 ft.	

HOPTON-WOOD STONE—

F.O.R. Quarries, Wirksworth, Derbyshire, Random blocks from 10 ft. and over P.ft.cb.	11 0
Sawn two sides	22 6

HOPTON-WOOD STONE—

Sawn three or four sides	27 0

YORK STONE, BLUE—*Robin Hood Quality.*
Delivered at any Goods Station, London.

6 in. sawn two sides landings to sizes (under 30 ft. super)	per ft.super	5 6
6 in. rubbed two sides, ditto	"	6 3
3 in. sawn two sides slabs (random sizes)	"	2 7
2 in. to 2½ in. sawn one side slabs (random sizes) (paving)	"	1 8½
1½ in. to 2 in., ditto	"	1 4½

HARD YORK—
Delivered at any Goods Station, London.

Scrappled random blocks.	per ft. cube	6 10
6 in. sawn two sides landings to sizes (under 40 ft. super)	per ft.super	5 7½
6 in. rubbed two sides, ditto	"	6 9
4 in. sawn two sides slabs (random sizes)	"	3 5
3 in. ditto ditto	"	2 8
2 in. self-faced random flags	Per yd. super	8 9

CAST STONE.

Delivered in London are in full van loads, per ft. cube: Plain, 7s. 6d. Moulded, 8s. 6d. Sills, 10s. 0d.

HARD WOOD.

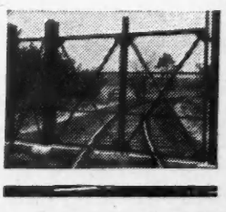
1 INCH AND UP THICK.

Average price for prime quality.	£ s. d.
Dry Austrian Wainscot, per ft. cube	0 17 0
Dry American and/or Japanese Figured Oak, per ft. cube ..... 10 6 to	0 13 0
Dry American and/or Japanese plain Oak, per ft. cube	0 11 6
Dry sq. edged Honduras Mahogany, per ft. cube.....	0 15 0
Dry log-cut Honduras Mahogany, per ft. cube..... 12 6 to	0 16 0
Dry Cuba Mahogany, per ft. cube	0 13 0
Dry Teak, per ft. cube	0 14 0
Dry American Whitewood, per ft. cube	0 10 6
Dry Australian Walnut, per ft. cube	0 19 0
Dry Queensland Silky Oak, per ft. cube	0 12 6
Dry African Mahogany, per ft. cube	0 10 0
Dry African Whitewood, per ft. cube	0 8 0
Dry English Wainscot Oak, per ft. cube	0 16 0
Best Scotch Glue, per cwt.	3 0 0
Liquid Glue, per cwt. ..... 4 7 0 to	5 10 0

SOFT WOOD.

MERCHANTABLE BRITISH COLUMBIAN PINE.

	Minimum. £ s. d.	Maximum. £ s. d.
Scantlings in imported sizes, 2in. by 3in. to 4in. by 11in.	43 10 0	53 0 0



Fencing and Gates

For Government Contracts and similarly important present-day requirements, let Boulton & Paul carry the whole of your Fencing commitment. Skilled erectors, first-class materials—in all, **a dependable service for urgent contracts.** Ask for Estimates. **STEEL BUNKS** can be supplied in large or small quantities. For quotations 'phone Norwich 851 (London: VIC. 8001) or write

Boulton & Paul, Ltd
London: Horseferry House, S.W.1 **Norwich**

PLANED BOARDS.

PRIME CLEAR BRITISH COLUMBIAN PINE.

	Per standard. £ s. d.
1in. by 11in. } 1in. by 9in. }	67 10 0

	Per square. s. d.
1in. plain edge flooring	53 0
1¼in. ditto	66 6
1in. tongued and grooved	53 0
1¼in. ditto	66 6

MATCHING.

	Per square. s. d.
⅝in.	37 6
¾in.	42 0
1in.	55 0

SLATES.

First quality slates from Penrhyn or Portmadoc, carriage paid in full truck loads to London Rate Station. Per 1,000 actual.

	£ s. d.		£ s. d.
24 by 12	34 17 6	18 by 10	19 5 0
22 by 12	29 0 0	18 by 9	17 15 0
22 by 11	26 15 0	16 by 10	16 17 6
20 by 12	26 2 6	16 by 8.....	13 10 0
20 by 10	24 0 0		

TILES.

Delivered at London rate stations in full truck loads of not less than 6 tons. .....Per 1,000 f.o.r. London

	£ s. d.
Best machine-made tiles from Broseley or Staffordshire district.....	£5 10 0
Ditto hand-made ditto	6 10 0
Ornamental ditto	6 15 0
Hip and valley tiles (per dozen) { Hand-made	0 11 6
{ Machine-made.....	0 11 0

METALS.

JOISTS, GIRDERS, &c., TO LONDON STATION PER TON—

R.S. Joists, cut and fitted	£22 10 0
Plain Compound Girders.....	25 0 0
" Stanchions	27 10 0
In Roof Work	32 10 0

NOTE.—These prices are for standard pieces and not special pieces of an awkward nature.
MILD STEEL ROUNDS.—To London Stations, per ton.

Diameter.	£ s. d.	Diameter.	£ s. d.
¼ in..	22 5 0	⅜ in. to ½ in...	20 15 0
⅝ in..	21 5 0	⅝ in. to 2½ in..	20 5 0

WROUGHT TUBES AND FITTINGS.
Deliveries from works.
Deliveries from London stock further 2½% gross.

	Tubes. ½"/6" %	Tubulars. ½"/6" %	Fittings. 10/17 19/24 %	Flanges. ½"/2" %	2½"/6" %
Light weight ..	55½	—	48	51½	58
Heavy weight ..	48½	48½	40½	41½	50½
Galv.lightweight	44½	—	39½	40½	49½
Galv.heavyweight	35½	35½	31½	30½	41½

Tubes and tubulars sizes ½"/½" inclusive, charged extra of 5% less gross.
Fittings. Figs. 25/34 5% less gross discount.
Terms.—Nett cash end of month following date of invoice. Carriage paid on lots of £10 nett value and over.

C.I. HALF-ROUND GUTTERS—London Prices ex Works. per yd. in 6 ft. lengths.

	Gutters.	Nozzles.	Stop ends.
3 in..	1/4½	1/1	4d.
3½ in.	1/5½	1/2½	4d.
4 in..	1/5½	1/4½	6½d.
4½ in.	1/6½	1/8	7½d.
5 in..	1/10½	1/11½	8d.

O.G. GUTTERS.

3 in..	1/9	1/5½	4½d.
3½ in.	1/11½	1/5½	6d.
4 in..	1/11½	1/6½	7d.
4½ in.	2/0½	1/9½	8d.
5 in..	2/6	2/0½	9½d.

RAIN WATER PIPES.

Per yd. in 6 fts.	Pipe.	Bends. Branches. Stock angles.	
2 in..	2/0½	1/4½	2/0
2½ in.	2/1½	1/6½	2/4½
3 in..	2/7½	1/11½	2/10½
3½ in.	3/1	2/3½	3/4½
4 in..	3/6½	2/9½	4/0½

NETT PRICES.
Tonnage allowance—4-ton lots, 5 per cent.
2-ton lots, 2½ per cent.

L.C.C. COATED SOIL PIPES.—London Prices, ex Stock.

Per yd. in 6 fts.	Pipe.	Bends.	Branches.
2 in.	3/4½	2/4½	2/10½
2½ in.	4/0½	2/7½	3/7½
3 in.	4/4½	2/10½	4/3½
3½ in.	4/5½	3/7½	5/0½
4 in.	4/10	4/0½	5/9½

L.C.C. COATED DRAIN PIPE.

	Pipe.	Bends.	Branches.
3 in. per yd. in 9 fts.	5/5	6/3	9/11
cwt. qr. lbs.			
4 in. 1 1 20.....	7/11	7/1	12/6
5 in. 1 2 22.....	9/7	12/9	19/3
6 in. 2 0 6.....	11/5	14/8	25/6

Gaskin 65/- per cwt.

* The information given on this page has been specially compiled for THE BUILDER, and is copyright. The aim in this list is to give, as far as possible, the *average* prices of materials, not necessarily the highest or lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information. Prices are subject to 2½ per cent. cash discount.

PRICES CURRENT OF MATERIALS—(contd).

	Per ton basis in London. £ s. d.		£ s. d.
IRON.—Staffordshire Crown, Merchant quality	17 2 6	to	18 7 6
IRON.—Staffordshire Marked Bars	20 0 0	to	22 0 0
Mild Steel Bars	19 12 0	to	21 2 0
Mild Steel Hoops	21 6 0	to	21 16 0
	Ex Merchant's Stock, per ton (two-ton lots).		
Soft Steel Sheets, C.R. and C.A.—			
20 gauge	24 17 6	to	27 5 0
24 gauge	25 2 6	to	27 0 0
26 gauge	25 17 6	to	27 15 0
Galvanised Corrugated Sheets, 6 ft. to 9 ft.—			
20 gauge	27 1 3	to	28 6 3
24 gauge	27 11 3	to	28 16 3
26 gauge	28 16 3	to	30 11 3
Galvanised Flat Sheets, C.R. and C.A.—			
20 gauge	28 11 3	to	30 8 9
24 gauge	29 1 3	to	30 18 9
26 gauge	30 6 3	to	32 3 9
	Per ton. £ s. d.		£ s. d.
Cut Nails, 3 in. and up	26 0 0	to	27 10 0
	ALL NETT.		

METAL WINDOWS.—Standard sizes, suitable for complete houses, including all fittings, painting two coats, and delivery to job, average price about 1s. 4d. to 1s. 7d. per foot super.

COPPER.

Seamless copper tubes (basis)	per lb.	1/3
Strong sheet	"	1/6
Thin sheet	"	1/7
Copper nails	"	1/6
" wire	"	1/6

PLUMBERS' BRASS WORK.

Delivered in London.
Stamped by Met. Water Board.

CRUTCH HEAD S.D. BIB COCKS FOR IRON. EASY CLEAN.

½ in.	¾ in.
34/-	53/- per doz.

CHROMIUM PLATED TOILET S.D. BIB COCKS FOR IRON. EASY CLEAN.

½ in.	¾ in.
50/-	68/- per doz.

S.D. STOP COCKS FOR IRON.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
37/6	53/-	87/-	202/-	288/-	460/- per doz.

S.D.S. COCKS WITH TWO UNIONS FOR LEAD.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
47/-	75/6	120/-	226/-	360/-	588/- per doz.

DOUBLE NUT BOILER SCREWS.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
8/10	9/9	15/9	27/3	44/-	63/6 per doz.

HEAVY CROYDON BALL VALVES. SCREW IRON.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.
45/-	73/-	120/-	204/-	260/- per doz.

CAPS AND SCREWS.

1¼ in.	1½ in.	2 in.	3 in.	3½ in.	4 in.
10/6	12/9	19/3	34/-	48/-	53/- per doz.

BRASS SLEEVES.

1½ in.	2 in.	3 in.	3½ in.	4 in.
9/9	12/6	22/6	33/-	42/- per doz.

DRAWN LEAD TRAPS WITH BRASS CLEANING SCREWS.

	1¼ in.	1½ in.	2 in.	3 in.
8 lb. Lead P.	29/-	38/-	54/-	93/- per doz.
8 lb. Lead S.	36/-	42/-	67/-	120/- "

SOLDER.—Plumbers, 1/5. Tinmen's, 1/8. Blow pipe, 1/10 per lb.

PAINTS, &c.

		£ s. d.
Raw Linseed Oil, in drums	per gallon	0 5 4
Boiled " " in drums	"	0 5 7
Turpentine, in drums (10 gals.)	"	0 5 3
Genuine Ground English White Lead, per ton (In not less than 5-cwt. casks).		61 0 0
Extra for 1-cwt. kegs over 5-cwt. casks is 2/9 cwt.		
GENUINE WHITE LEAD PAINT "Father Thames," "Nine Elms," "Park," "Supremus," "St. Paul's," "Morganswyte," "Polacco," "J" Brand, and other best brands (in 14 lb. tins) not less than 5-cwt. lots	per ton delivered	83 10 0
Red Lead. Dry (packages extra)	per ton	52 0 0
Best Linseed Oil Putty (1 ton lots)	per cwt.	0 17 1½
Size. XD quality	fkn.	0 3 6

Turpentine substitute can be obtained and prices vary according to the quality from 2/9 gallon upwards.

VARNISHES, &c.

		Per gallon.
Oak Varnish	Outside	0 14 0
Fine do.	"	0 16 0
Fine Copal	"	0 18 0
Pale Copal	"	1 0 0
Pale Opal Carriage	"	1 4 0
Best do.	"	1 12 0
Floor Varnish	Inside	0 18 0
Fine Pale Paper	"	0 18 0
Fine Copal Cabinet	"	1 2 0
Fine Copal Flatting	"	1 0 0
Hard Drying Oak	"	0 18 0
Fine Hard Drying Oak	"	0 19 6
Fine Copal Varnish	"	1 0 6
Pale do.	"	1 12 0
Best do.	"	1 2 6
Best Japan Gold Size		1 12 6
Best Black Japan		0 10 0
Oak and Mahogany Stain (water)		0 12 0
Brunswick Black		0 7 6
Berlin Black		0 14 0
Knotting (patent)		0 15 0
French and Brush Polish		0 12 0
Liquid Dryers in Terebene		0 9 0
Cuirass Black Enamel		0 7 0

GLASS.

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES.

ORDINARY GLAZING QUALITY (O.Q.) AND SELECTED GLAZING QUALITY (S.Q.).

PER FOOT SUPER.

In sizes not exceeding 80 in. long or 48 in. wide or 110 united inches.

	O.Q.	S.Q.
18 oz. in 300 ft. cases	2½d.	2¾d.
24 oz. " 200 ft. "	3½d.	4d.
26 oz. " 200 ft. "	3¾d.	4¼d.
32 oz. " 200 ft. "	5¼d.	6¼d.
24 oz. " 300 ft. "	3¼d.	3¾d.
26 oz. " 300 ft. "	3¾d.	4¼d.
32 oz. " 300 ft. "	5¼d.	6¼d.
18 oz. Obscured Sheet		5¼d.
24 oz. Obscured Sheet		6¼d.
Fluted, 21 oz.		9d.
Enamelled, 18 oz.		5¼d.
" 24 oz.		6¾d.

Extra price according to size and substance for squares cut from stock.

ENGLISH ROLLED PLATE AND FIGURED CATHEDRAL, ETC., IN CUT SIZES.

	Per ft.
Rolled plate, ¼ in.	5¾d.
Rough cast double rolled, ⅜ in.	6¾d.
Rough cast double rolled, ½ in.	6¾d.
Figured rolled, and Cathedral, white	6¾d.
Figured rolled and Cathedral, tinted	9¾d.
Rolled Sheet	6d.
Reeded, Broad Reeded, Cross Reeded and Chevron Reeded, ¼ in. thick	0 10½

Rolled plate is the same price as rough cast double rolled.

	Per ft. s. d.
Wire Rolled, ¼ in. thick	0 9½
Wired Cast, ¼ in. thick	0 9½
Georgian Wired Cast	0 10
"Calorex" Sheet, 21 oz.	2 6
" " 32 oz.	4 0
" Cast, ¼ in. thick	0 10
" " ⅜ in. thick	1 0
" " ½ in. thick	1 2
Non Actinic Glass, ¼ in. thick	0 9½
" " " ⅜ in. thick	1 0
" " " ½ in. thick	1 2

"VITA" GLASS.

	Per ft. s. d.
"Vita" Plate Glass, about 5/32 thick:	
To 7 ft. super	5 0
Over 7 ft. super	7 6
"Vita" Sheet Glass, about 18/20 oz.	2 0
Cathedral "Vita" Glass:	
¼" thickness	2 0
3/16" "	3 0
3/16" Georgian Wired "Vita" Glass	3 6

LEAD, &c.

(Delivered in London.)	Per ton. £ s. d.
LEAD.—Sheet, English, 4 lb. and up	34 10 0
Pipe in coils	34 0 0
Soil pipe	39 10 0
Compo pipe	41 5 0

NOTE.—Country delivery, 20/- per ton extra, lots under 3 cwt. 4/- per cwt. extra and over 3 cwt. and under 5 cwt., 2/6 per cwt. extra. Cut to sizes, 4/- per cwt. extra.

Old lead, ex London area, at Mills ..... per ton £18 0 0.

BUILDING TRADE WAGES IN SCOTLAND

Following are grade rates authorised by the Scottish N.J.C. from October 1. Every endeavour is made to ensure accuracy, but we cannot be responsible for errors that may occur.

Grade Classification	A	A¹	A²	A³	B	B¹
Craftsmen	1/10	1/9½	1/9	1/8½	1/8	1/7½
Labourers	1/4½	1/4½	1/3¾	1/3½	1/3	1/2¾

Aberdeen	A	Dumfriesshire	A²	Inverness	*	Perthshire	A²
Ayrshire	A	Dundee	A	Inverurie	A¹	Peterhead	A¹
Banff	B	Dunoon	A	Kincardineshire	A²	Renfrewshire	A
Berwickshire	A²	East Fife	A	Kinross-shire	A	Rothesay	A
Bridge of Allan	A	East Lothian	A	Lanarkshire	A	Roxburghshire	A²
Broughty Ferry	A	Edinburgh	A	Midlothian	A	St. Andrews	A
Clackmannanshire	A	Fifeshire	A	Monifieth	A	Selkirkshire	A²
Doune	A	Forfarshire	A²	Moray and Nairn	B	Stewartry	A²
Dunblane	A	Glasgow	A	Newport	A	Stirlingshire	A
Dumbartonshire	A	Greenock	A	Peeblesshire	A²	Stornoway	A²
Dumfries	A¹	Hamilton	A	Perth	A	Tayport	A
						West Lothian	A

* This town has its own rates: Masons, 1/8; Carpenters, 1/8; Slaters, 1/8; Plumbers, 1/8½; Plasterers, 1/9 but 1/9½ is paid owing to the scarcity at present; Painters, 1/8 and Labourers, 1/3½.

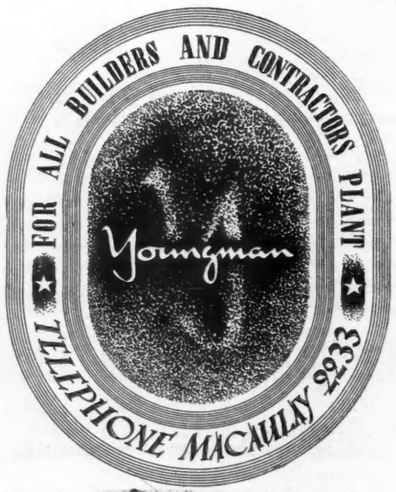
The information given in this table is copyright. Rates of wages in England and Wales are given on page 630.

THE SCOTTISH BUILDER

ABERDEEN.—BUILDING.—The T.C. has agreed to erect a permanent building for use as a canteen and recreation-room at the municipal workshops. The estimated cost is £543.—The Council has agreed to erect a building and provide equipment, at £16,000, for gas work improvements.

DUNOON. — HOSPITAL. — The Argyllshire C.C. has agreed to purchase premises for converting into a maternity hospital.

GLASGOW. — BUILDING. — The Dean of Guild Court has approved of the following plans: Messrs. Gray, Dunn & Co., Ltd.—alterations at their premises (architects, Messrs. Watson, Salmond & Gray, 111, Union-street); Messrs. John Craig—to reconstruct premises (architects, Messrs. Thomson, Sandilands & McLeod, 248, West George-street); British Bitumen Emulsions, Ltd., of Slough—store (Messrs. Miller & Cowie, architects, Wishaw and Motherwell).



NEW BUILDINGS IN LONDON

EALING.—BUILDING.—Plans passed by T.C.: Messrs. Ponds Extract Co. (builders, Messrs. W. J. Dickens, Ltd., 19, The Broadway, W.5), strong room and shelter; The Rickmansworth and Uxbridge Valley Water Co., new office.

ENFIELD.—BUILDINGS.—The Middlesex E.C. has accepted the tender, at £5,653 11s., of Messrs. William Moss and Sons, Ltd., for the completion of the new buildings.

A Council Election.

Mr. Frederick John Gayer, head of the firm of E. A. Roome and Co., Ltd., has been elected to Stoke Newington Council. Mr. Gayer is a past-president of the London Master Builders' Association.

New Map of the Colonial Empire.

"The Crown Colonist" has just issued an entirely new map of the British Colonies, Protectorates, Mandated and High Commission Territories and Anglo-Egyptian Sudan, showing their situation and size in relation to one another and to the British Isles. 37 in. by 48 in., the map is available unmounted, price 6s. net; mounted on cloth and varnished, with rollers, or on cloth dissected to fold, price 15s. net, on application to 33, Tothill-street, Westminster, S.W.1.

IN PARLIAMENT

Requisitioned Hotels.

SIR R. GOWER asked the Parliamentary Secretary to the Ministry of Works and Buildings how many requisitioned hotels and halls his Department had still not used; and whether, in view of the shortage of accommodation in the country districts, he would liberate all buildings where retention was not essential.

MR. G. HICKS said that thirty-two hotels and halls had not been used, but all but two of these had been placed at the disposal of the Service Departments. Arrangements were being made to lend the remaining two to the Service Departments also. The Minister was fully alive to the need for using all empty buildings, having regard to the prevailing shortage of accommodation.

Blast-proof Houses.

MR. R. DUCKWORTH asked the Minister of Health whether he had been consulted with regard to the current construction of blast-proof houses in Great Britain; whether an effort would be made to avoid the creation of whole streets of unattractive houses; and could he give any details regarding the construction by local authorities of blast-proof houses in the provinces, especially as regarded cost, numbers and design.

MR. MACDONALD said that the majority of the new houses being built by local authorities for munition workers were not blast-proof to the same extent as air raid shelters, but they contained a specially strengthened compartment and their concrete roofs and floors gave protection against incendiary bombs and splinters. It was not yet possible to give particulars of cost, but he was sending his hon. friend a copy of Wartime Building Bulletin No. 7, dealing with the construction of houses, which had been issued by the Department of Scientific and Industrial Research. The answer to the first part of the question was in the affirmative.

Cement Suppplies.

In the House of Commons, MR. R. J. DAVIES asked the Parliamentary Secretary to the Ministry of Works and Buildings whether he was prepared to make a statement with regard to the position of cement supplies.

MR. G. HICKS, replying, said it was a mistake to suppose that the cement industry had not been progressive. Since 1930 its output has practically doubled, and during the three years prior to the war the capacity of the industry was increased by over 25 per cent. In the early part of the war the industry had no difficulty in fulfilling all orders punctually, but during the middle of the summer a sudden and abnormal demand set in. Since then the industry has been working to capacity, and all idle works that were capable of being started up were started up. In order to ensure the equitable distribution of cement the Government introduced a voucher system. This did not work altogether satisfactorily, and local shortages occurred, partly due to the issue of vouchers and partly to transport difficulties. With the formation of the Ministry the industry was now controlled, and the question of making provision for the manufacture of blast-furnace and other types of cement and for laying down additional plant was under active consideration. As, however, there were at present ample supplies of cement for all purposes and over 250,000 tons already in stock, Lord Woolmer had decided to discontinue the voucher system. It would, therefore, be possible for all persons requiring cement to obtain their requirements, subject to transport exigencies.

Air-raid Damage.

In the House of Lords, LORD LISTOWEL asked the Government whether their attention had been drawn to the delays in salving furniture and other personal possessions from houses and other buildings which had been damaged in air raids. He said that there had been delay in the repair of roofs of damaged houses and in the removal of the contents of houses damaged beyond repair. Where local authorities had done little or nothing, the Government should assume responsibility and act in their place. He was glad that the Government had decided to release temporarily 3,000 building trade operatives from the Army as that would assist local authorities in doing first-aid repairs. But he could not see why the number released should not be considerably larger. Building work of great urgency could be found for many more, and the lull of the war on land was a favourable moment to take more men away for the time being from their military duties.

LORD CROFT, Under-Secretary for War, said that the whole question of the salving of furniture had recently been examined by an Inter-Departmental Committee. The report of that Committee was now under consideration, and if it was necessary to make changes in the existing machinery, these could be made without delay. The Army was more than ready to assist in the work of salvage. Thousands of pioneers and large numbers of Army vehicles were being used in various parts of the country. The Army had, wherever possible, endeavoured to release men for essential services. Three thousand men had already been released to repair roofs of houses.

Rebuilding Bombed Buildings.

MR ROSTROM DUCKWORTH asked the Parliamentary Secretary to the Ministry of Works and Buildings, what was his policy with regard to the reconstruction or rebuilding of bombed buildings at present.

MR. G. HICKS said that so far as houses were concerned, the main responsibility rested with local authorities. But in those cases where the Ministry of Works and Buildings was supplementing the efforts of local authorities in this direction, the policy was to do first-aid repairs in order to render the houses fit for occupation, and later, when opportunity offered, to carry out repairs and reinstatement of a more permanent nature. Where, however, a house was so damaged as to be incapable of reinstatement, extensive reconstruction or complete rebuilding would only be allowed if necessary for the housing of essential war workers. The same considerations applied to other types of building, both those for which the Ministry of Works and Buildings was directly responsible and also private concerns engaged on important war output.

DON'T TENDER UNSUCCESSFULLY

SECURE CONTRACTS WITH

THE STEEL SCAFFOLDING CO., LTD.

"BIG BEN TOWERS," 23, OATLANDS DRIVE, WEYBRIDGE, SURREY.

'Phone: Walton-on-Thames 614 and 615.

TENDERS

The Editor welcomes authentic information for this feature from architects, surveyors or contractors. Items should reach 4, Catherine-street, Aldwych, W.C.2, not later than Tuesday morning.

Tenders for A.R.P. work will be found under "A.R.P. Schemes."

* Denotes *accepted.*
† Denotes *provisionally accepted.*
‡ Denotes *recommended for acceptance.*
§ Denotes *accepted subject to modification.*
¶ Denotes *accepted by H.M. Government departments.*

Aberdeen.—Works at ante-natal annexe, for T.C. : Cork flooring, *Armstrong Cork Co., London, £333 10s.

Birmingham.—Works for E.C. : Additional protection at Cottage Homes, *W. B. & F. T. Archer, Handsworth, Birmingham, £920; shelters at school, *Walter Seaton, High-st., Harborne, Birmingham, £815; additional protection within premises at school, *W. Sapcote & Son, Camden-st., Birmingham, £92; additional protection at residential school, *C. Green & Sons, Monument-rd., Birmingham, £220; additional protection at College of Arts and Crafts, *C. Green & Sons, £89; waterproofing tops of overground shelters at schools, *B. Whitehouse & Sons, and *F. Davis (Builders), Ltd., Birmingham.

Brechin.—22 houses, for T.C. : Mason, *Walker, Kirkcaldy, £9,680 1s. 1½d.; plumber, *Mitchell, Kirriemuir, £1,120 13s. 2d.; plasterer, *Burness, Montrose, £799 18s. 2d.; roughcast, *Burness, £317 7s. 6d.; joiner, *Black & Son, Brechin, £1,936 16s. 2d.; composite roofing, *Briggs, Dundee, £578 13s. 4d.; glazier, *Cameron, Dundee, £31 6s. 1d.; painter, *Nicolson, Kirkcaldy, £239 2s. 9d.; electric work, *Stenson, Dundee, £299 10s.; steel windows, *Walker, Kirkcaldy, £214 5s.

Bromsgrove.—Repairs to roof of market, for U.D.C. F. W. Goodman, S. : *J. & A. Brazier, Ltd., Worcester-rd., Bromsgrove, £125.

Bromsgrove.—Drainage for maternity ward at Long Rede, Barnt Green, for Board of Management of Birmingham General Hospital : *J. & A. Brazier, Ltd., Worcester-rd., Bromsgrove.

Darlington.—Extensions to church : *G. & R. Oliver, 46, Kensington-gdns., Darlington.

Doncaster.—Additions to fire station, for C.B. R. E. Ford, Assoc.M.Inst.C.E., Estates Surveyor, 3, Priory-pl. : *P. P. Taylor (Doncaster), Ltd., 6, South-parade, Doncaster, £734 4s.

Haltwhistle.—Water supply scheme, for R.D.C. : *T. B. Ford, Wedler.

Hindley.—Outside painting Moss-la. council school, for E.C. : *J. Peters & Sons, Atherton-rd., Hindley-green.

Hornsey.—Works for T.C. : Repair of Cross-la. sewer, *J. Shelbourne & Co., Ltd.; shelter accommodation at ambulance stations, *H. Hanson, Ltd.

Keighley.—Extensions to vertical retorts, for T.C. E. N. Booth, Eng. : *Drake's, Ltd., Ovenden, Halifax.

Kidsgrove.—Reconditioning of the Foundry : *J. T. Luton & Son, Ltd., 14, Forest-la., Stratford, London, E.15.

Kirkham.—Recreation hall and canteen, for Y.M.C.A., 83, Bridge-st., Manchester. Hubert A. Thomas, A.R.I.B.A., architect, 36, Dale-st., Liverpool : *H. & J. R. Bradshaw, Hill-la., Blackley, Manchester.

Leek.—(1) Boiler-house and chimney; (2) extensions to existing boiler-house, for U.D.C. : (1) *Adamson & Son, £3,716; (2) *J. Bailey, Ltd., 37, High-st., Harrisahead, Congleton, £168.

¶London (Air Ministry).—Contracts placed to value of £500 or over for week ended Dec. 14 :—

Asbestos work : Universal Asbestos Manufacturing Co., Ltd., Watford.

Structural steelwork : Redpath, Brown & Co., Ltd., Glasgow.

Erection of structural steelwork: Braithwaite & Co., Ltd., London.

Civil engineering work: Chittenden & Simmons, Ltd., Great Haseley, near Oxford.

Air filtration work: Benham & Sons, Ltd., London.

General maintenance work: A. J. Darneley & Son, Ltd., Hull; Doulton Bros., Ltd., Worcester; and W. J. B. Halls, Ltd., Gloucester.

Middlesbrough.—Painting with fire-resisting paint, roof timbers of town hall, for T.C.: *Stephen Coates, Ltd., Middlesbrough, £102.

Northampton.—Alterations and additions to large hall at school clinic, for C.B. Keightley Cobb, F.R.I.B.A., Architect to the Education Committee, 46, Hazelwood-rd.:—

R. H. Hewins, Ltd.	£613	0
J. E. Lucas, Ltd., Moulton ...	587	0
E. Green & Sons	563	0
W. J. Richardson & Son	560	0
C. H. Lack, Ltd.	558	0
*W. E. Cockrill & Son	527	2

(Rest of Northampton.)

Scunthorpe.—Alterations to "Empire." Buttrick & Buttrick, L. & A.R.I.B.A., chartered architects, 43, Oswald-rd.:—

Quibell & Hardy, Ltd.	£398	0
Betts & Newbert	346	0
F. J. Brown...	340	12
W. Pallister, Ltd.	280	0
†H. J. Thompson, Ltd.	274	0

(All of Scunthorpe.)

Usk.—Public and communal shelters, for U.D.C. A. L. Lucas, S.:—

D. Young & Sons, Pontypool...	£424	18	11
W. J. Sweet & Sons, Usk ...	349	0	0
A. N. Coles, Plymouth ...	327	16	7
South Benfleet Builders' Supply Co., Ltd., Newport (Mon.)	279	6	4
*Wm. Arthur, Ltd., Abersychan	277	9	6
E. Sainsbury, Glascoed ...	262	15	1

Uttoxeter.—20 houses, for R.D.C. C. E. Ingham, Sur.: *Ripleys, Ltd., Moseley-st., Ripley, £9,800.

Wakefield.—Workshops, for T.C.: *G. Crook & Sons, £343 15s. 6d.

Wakefield.—Branch bank, 55, Westgate, for Martins Bank, Ltd., 7, Water-st., Liverpool. Kitson, Parish, Ledgard & Pyman, architects, Lloyds Bank-chams., Leeds: *Sharp & Law, Carlisle-rd., Bradford.

FLOORINGS
'phone
BAYswater 0163
or send your enquiry for
Wood Block, T & G Strip,
Parquet (in various designs)
and Composition Floorings.
TO
TURPINS PARQUET FLOORING Co. Ltd.
25 NOTTING HILL GATE, W.11
Established 1866

CURRENT AND PROPOSED BUILDING WORK*

Accrington.—J. A. Grimshaw, architect, 24, Willow-st., been appointed to prepare plans for completion of St. Paul's Church for Vicar, Rev. C. Smith, and Parochial Church Council.

Ashton-under-Lyne.—Gartsides Brookside Brewery, Ltd., propose new hotel. A. Buckley, resident architect, Brookside Brewery.

Brighton.—T.C. approved: Extension to shop and rebuilding rear upper portion, J. Sainsbury, Ltd.

Carlisle.—T.C. approved: Canteen extension, for Pratchitt Bros., J. and R. Bell, Ltd., builders; staff hostel, L.M. and S. Rly. Co.

Chester.—T.C. approved: Extensions to canteen at Northgate-wks., for Brookhirst Switchgear, Ltd.

Darlaston.—U.D.C. propose conversion of Primitive Methodist schools and other schools for community centres for 60 persons each. Plans by N. H. Hughes, Sur.

Darlington.—Darlington Rolling Mills, Ltd., to build boiler house.—T.C. to build decontamination laundry, Haughton-rd., to plans by E. Minors, Boro' Eng.

Gravesend.—T.C. approved: G. E. Wallis and Sons, Ltd., extension at factory, Gravesend Ice and Cold Storage Co., Ltd.; Horace Prentice, block of three garages, for himself.

Hebburn-on-Tyne. — U.D.C. to obtain tenders for improving water services at 76 houses. Plans by W. Dibble, Acting Sur.—Hetherington and Wilson, County-chams., Westgate-rd., Newcastle-on-Tyne, prepared plans for alterations to "Caledonian Hotel."

Jarrow.—Housing Committee of Corporation received from M.H. sanction to completion of 28 houses.

Macclesfield.—R.D.C. passed plans for 62 houses.

Maidenhead.—R.D.C. passed plans of garage, dry store and additional office accommodation, for Odeon Theatres, Ltd.

Manchester.—Plans approved by T.C.: Alterations to canteen and works extensions, I.C.I., Ltd., Blackley; additions to works, Wardle Cotton Co., Ltd., Wardle, near Rochdale, J. E. Kewell (L.), architect, 290, Oxford-rd., Chorlton-on-Medlock; works, Brayshaw Furnace, Ltd., H. Burke and Son, engineers, 15a, Green-la., Brook-st., Chorlton-on-Medlock; offices and service depot, Hoover, Ltd., Greenford, Middlesex; social hall and canteen, Y.M.C.A., 83, Bridge-st., Deansgate; canteen to works, David Rosenfield, Ltd., 15, Victoria-st., P. Cummins, architect, 31a, King-st. West.

Morley.—T.C. approved: Alterations to "Malt Shovel" inn, Stretton's Derby Co., Ltd.

Nantwich.—R.D.C. received sanction of M.H. to borrow £13,600 for housing purposes.

Northallerton.—Council to improve water supply. Plans by O. E. Hillyard, Sur.

* See also List of Contracts Open.

Portsmouth.—T.C. approved: Waring (Contractors), Ltd., additions to offices; John Lay and Co., Ltd., for Gieves, Ltd., rebuilding shops with flat over.

Reading.—T.C. passed plans for fire station for Samuel Elliott and Sons, Ltd., of Caversham, Reading.

Stockton-on-Tees.—Plans approved for extending laboratory for I.C.I., Ltd.

Stoke-on-Trent.—T.C. propose new bridge. Plans by A. Burton, City. Eng.—T.C. approved additions to club headquarters, Building Committee of Longton Workmen's Club.

Swansea.—C.B. approved: Offices, etc., Paxton-st., Griff. Davies and Co., Ltd.—Plans passed for temporary buildings: Mission hall, Heol-y-gors, F. A. Goodwin; hall, Welfare Association; hall, R. A. Jones; school, B. D. Williams; classroom, Memorial Church, Trustees.

Tynemouth.—T.C. to obtain tenders for under-building to house the venturi meter tube. Plans by W. McKerrow, 5, Northumberland-sq., North Shields.—Home Office approved T.C.'s plan to spend £777 on fireproofing and adaptation work of Liberal Club.

Wellington (Salop).—R.D.C. propose 12 shops and maisonettes. Plans by J. Brian Cooper, architect, 177, Corporation-st., Birmingham. Quantities by W. Bond, F.S.I., 3, Newhall-st., Birmingham.

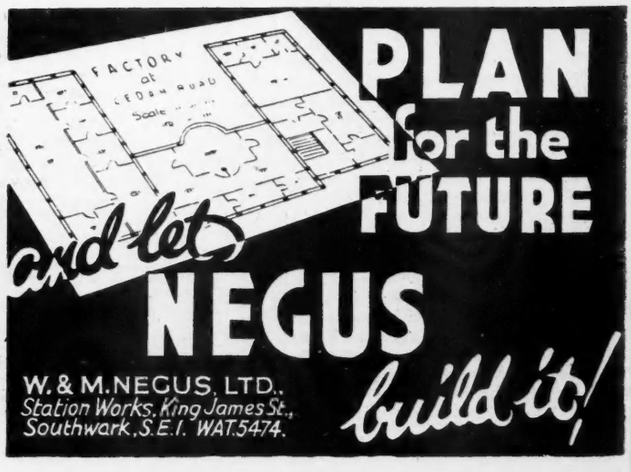
Wolverhampton. — T.C. approved: C. Attwood and Sons, office; Victory Plating Co., rebuilding; Eadie and Co., Ltd., extension to factory; G. C. Blane, extension to workshop.

Boyle's Patent "Air-Pump" Ventilator
OVER TWO MILLION IN USE.
ROBERT BOYLE & SON,
Ventilating Engineers, 65, HOLBORN VIADUCT, LONDON, E.C.1. Tel. Central 4583.

HOSPITAL & SCHOOL STOVES
SOLE MAKERS OF
WRIGHT'S IMPROVED AND ALSO SHORLAND'S PATENT WARM AIR VENTILATING PATTERNS.
GEO. WRIGHT (LONDON) LTD.
19 NEWMAN ST. OXFORD ST. LONDON, W.1

BUY BRITISH
FLOORINGS
WOOD BLOCK PARQUET
SOLID T & G HARDWOOD
PANELLING
POINT PLEASANT LONDON S.W.18
Stevens & Adams Ltd.
PHONE PUTNEY 5611 (6 lines)

TAYLOR WOODROW CONSTRUCTION LTD.
BUILDING
AND
CIVIL ENGINEERING CONTRACTORS
RUISLIP ROAD • SOUTHALL • MIDDX.
TELEPHONE: WAXLOW 2366 (6 lines)
TELEGRAMS: TAYWOOD, SOUTHALL



PLAN for the FUTURE
and let
NEGUS
build it!
W. & M. NEGUS, LTD.,
Station Works, King James St.,
Southwark, S.E.1. WAT. 5474.